



STIC Search Report

EIC 1700

STIC Database Tracking Number: 207265

TO: Camie Thompson
Location: Remsen 10d28
Art Unit : 1774
November 14, 2006
Phone: 571-272-1530
Serial Number: 10 / 542085

From: Jan Delaval
Location: EIC 1700
Remsen 4a30
Phone: 571-272-2504

jan.delaval@uspto.gov

Search Notes

Access DB# 207205

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Connel S. Thompson Examiner #: 79244 Date: 11/13/06
Art Unit: 1774 Phone Number 3057120730 Serial Number: 10/542 085
Mail Box and Bldg/Room Location: Room 10028 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Light Emitting Device Condensed PolycyclicInventors (please provide full names): YASUAKI IKEDA; TAKAAKI KURATA;
TERUPEI TSUCHIDA; CHIHAYA ADACHI.Earliest Priority Filing Date: 1/17/03

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please do a search in all
Claims

SCIENTIFIC REFERENCE BR
Sci & Tech Inf. Cntr

NOV 14 RECD

Pat. & T.M. Office

Search

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>Gar</u>	NA Sequence (#) _____	STN <input checked="" type="checkbox"/>
Searcher Phone #: <u>22504</u>	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <input checked="" type="checkbox"/>	Questel/Orbit _____
Date Searcher Picked Up: <u>11/14/06</u>	Bibliographic _____	Dr. Link _____
Date Completed: <u>11/14/06</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: _____	Fulltext _____	Sequence Systems _____
Clerical Prep Time: <u>55</u>	Patent Family _____	WWW/Internet _____
Online Time: <u>150</u>	Other _____	Other (specify) _____



STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact the EIC searcher or contact:

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- I am an examiner in Workgroup: Example: 1713
➤ Relevant prior art found, search results used as follows

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

- Relevant prior art not found:

- ☐ Results verified the lack of relevant prior art (helped determine patentability)
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

=> fil reg

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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 12 NOV 2006 HIGHEST RN 913055-81-9
DICTIONARY FILE UPDATES: 12 NOV 2006 HIGHEST RN 913055-81-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

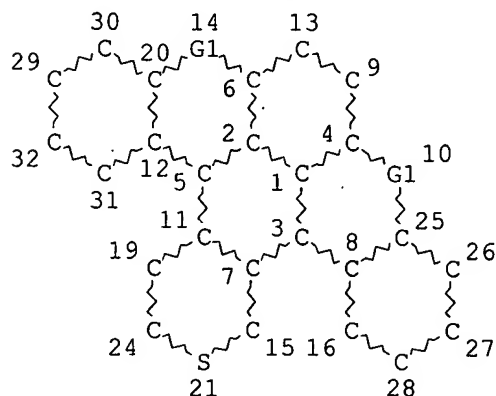
Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> d sta que 110

L4 STR



VAR G1=O/S/SE/TE/N

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

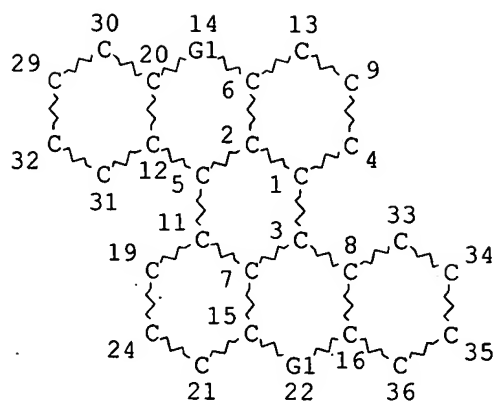
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 28

STEREO ATTRIBUTES: NONE

L7 STR



VAR G1=O/S/SE/TE/N

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 28

STEREO ATTRIBUTES: NONE

L10 124 SEA FILE=REGISTRY SSS FUL L4 OR L7

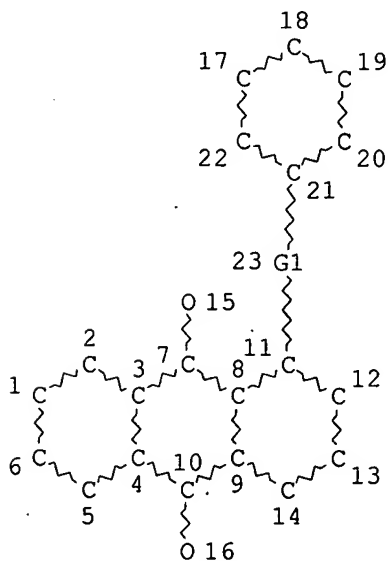
100.0% PROCESSED 197669 ITERATIONS

124 ANSWERS

SEARCH TIME: 00.00.04

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L70 STR



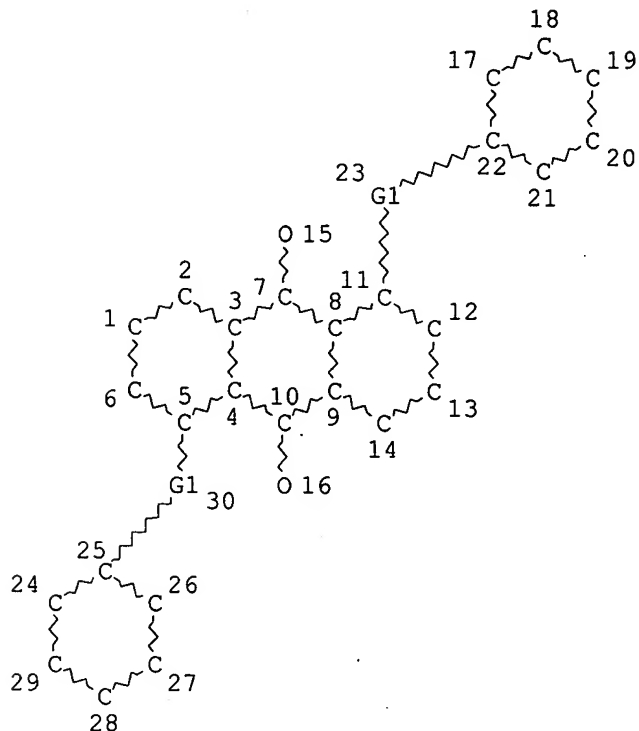
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NODE ATTRIBUTES:

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 CONNECT IS E1 RC AT 16
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 23

STEREO ATTRIBUTES: NONE
 L72 20306 SEA FILE=REGISTRY SSS FUL L70
 L73 STR



VAR G1=O/S/SE/TE/N
 NODE ATTRIBUTES:
 CONNECT IS E1 RC AT 15
 CONNECT IS E1 RC AT 16
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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 NUMBER OF NODES IS 30

STEREO ATTRIBUTES: NONE
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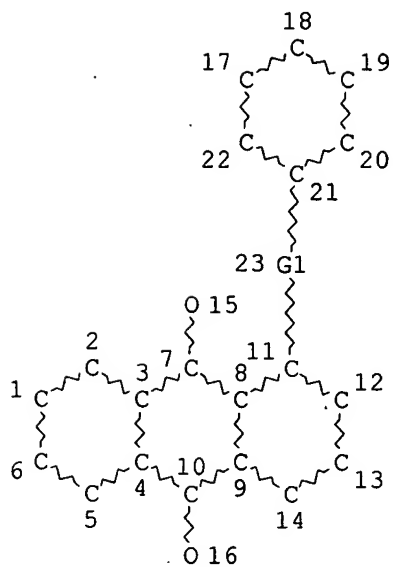
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2642 ANSWERS

=> d sta. que 176

L70

STR



VAR G1=O/S/SE/TE/N

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CONNECT IS E1 RC AT 16

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

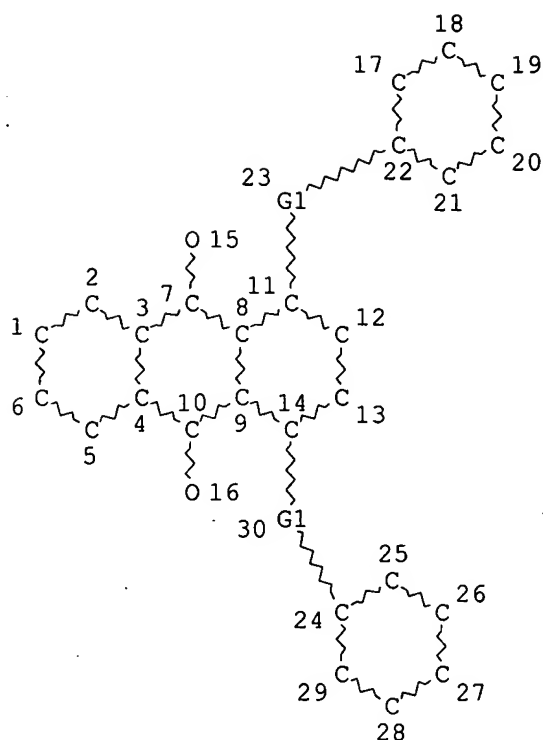
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NUMBER OF NODES IS 23

STEREO ATTRIBUTES: NONE

L72 20306 SEA FILE=REGISTRY SSS FUL L70

L75 STR



VAR G1=O/S/SE/TE/N

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 15

CONNECT IS E1 RC AT 16

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 30

STEREO ATTRIBUTES: NONE

L76 3405 SEA FILE=REGISTRY SUB=L72 SSS FUL L75

100.0% PROCESSED 14359 ITERATIONS

3405 ANSWERS

SEARCH TIME: 00.00.01

=> d his

(FILE 'HOME' ENTERED AT 09:12:55 ON 14 NOV 2006)

SET COST OFF

FILE 'HCAPLUS' ENTERED AT 09:13:10 ON 14 NOV 2006

L1 1 S US20060051612/PN OR (US2005-542085# OR WO2004-JP306 OR JP2003
SEL RN

FILE 'REGISTRY' ENTERED AT 09:14:24 ON 14 NOV 2006

L2 39 S E1-E39

L3 STR

L4 STR
 L5 0 S L3
 L6 0 S L4
 L7 STR L3
 L8 0 S L7
 L9 0 S L4 OR L7
 L10 124 S L4 OR L7 FUL
 SAV L10 CAMIE542/A
 L11 17 S L2 AND L10
 L12 107 S L10 NOT L11
 L13 29 S L12 AND (C32H19NO3 OR C40H42N2O6 OR C38H24N2O2 OR C30H16O4 OR
 L14 78 S L12 NOT L13
 L15 95 S L11,L14

FILE 'HCAOLD' ENTERED AT 09:36:12 ON 14 NOV 2006

L16 1 S L15
 L17 0 S L13
 SEL AN L16

FILE 'HCAPLUS' ENTERED AT 09:37:02 ON 14 NOV 2006

FILE 'HCAOLD' ENTERED AT 09:37:30 ON 14 NOV 2006
 EDIT E40 /AN /OREF

FILE 'HCAPLUS' ENTERED AT 09:37:45 ON 14 NOV 2006

L18 1 S E40
 L19 64 S L15
 L20 64 S L18,L19
 E IKEDA/AU
 L21 2 S E3
 E IKEDA M/AU
 L22 645 S E3,E4
 L23 242 S E25,E26
 E IKEDA NAME/AU
 L24 91 S E4
 E MASA/AU
 E MASAAKI/AU
 L25 2 S E3
 E KURATA/AU
 L26 1 S E3
 E KURATA T/AU
 L27 70 S E3,E11
 E KURATA NAME/AU
 L28 4 S E4
 E TAKA/AU
 E TAKAAKI/AU
 L29 2 S E3
 E TSUCHIDA/AU
 E TSUCHIDA T/AU
 L30 65 S E3
 E TSUCHIDA TEP/AU
 L31 11 S E4
 E TSUCHIDA NAME/AU
 L32 2 S E4
 E TEP/AU
 E TEPPEI/AU
 E ADACHI/AU
 L33 1 S E3
 E ADACHI C/AU
 L34 249 S E3,E10

L35 E ADACHI NAME/AU
 21 S E4
 E CHI/AU
 E CHI H/AU
 E CHIHAYA/AU
 L36 4 S L20 AND L21-L35
 L37 2 S L20 AND (NIPPON?(L) (KAYAKU? OR KABUSHIKI? OR KAISHA?))/PA,CS
 L38 4 S L36,L37
 L39 4 S L1,L38

FILE 'REGISTRY' ENTERED AT 09:44:07 ON 14 NOV 2006

L40 1 S 733054-47-2
 L41 1 S 155653-47-7

FILE 'HCAPLUS' ENTERED AT 09:44:29 ON 14 NOV 2006

L42 64 S L40,L41,L20
 L43 4 S L42 AND L39
 L44 9 S L42 (L) DEV/RL
 E DEVICE/CW,CT
 L45 4 S L42 AND E3,E5
 E ELECTROLUMINESCENT DEVICE/CT
 E E5+ALL
 L46 51481 S E18+OLD,NT
 L47 977777 S E15+OLD,NT OR E16+OLD,NT
 E PHOTOELECTRIC DEVICE/CT
 E E4+ALL
 L48 61624 S E5+OLD,NT
 L49 29041 S E26+OLD,NT
 L50 4 S L42 AND L46-L49
 L51 10 S L43,L44,L45,L50
 L52 3 S L42 AND LIGHT(L) DEVICE
 L53 0 S L42 AND LIGHT(L) APPARATUS
 L54 18 S L42 AND LIGHT
 L55 10 S L51,L52
 L56 5 S L54 AND L55
 L57 13 S L54 NOT L56
 L58 2 S L57 AND 73/SC,SX
 L59 2 S L57 AND OPTIC?/SC,SX
 L60 12 S L55,L56,L58,L59
 L61 21 S L42 AND P/DT
 L62 15 S L61 NOT L60
 SEL DN AN 1-5
 L63 5 S L62 AND E1-E15
 L64 17 S L60,L63
 L65 60 S L42 AND (PY<=2003 OR PRY<=2003 OR AY<=2003)
 L66 15 S L64 AND L65
 L67 2 S L64 NOT L66
 L68 17 S L64,L66,L67
 L69 17 S L68 AND L1,L18-L39,L42-L68

FILE 'REGISTRY' ENTERED AT 09:52:58 ON 14 NOV 2006

L70 STR
 L71 50 S L70
 L72 20306 S L70 FUL
 L73 STR L70
 L74 2642 S L73 FUL SUB=L72
 SAV L74 CAMIE542A/A
 L75 STR L73
 L76 3405 S L75 FUL SUB=L72
 SAV L76 CAMIE542B/A

FILE 'HCAPLUS' ENTERED AT 09:57:09 ON 14 NOV 2006

L77 13 S L74,L76 AND L42
 L78 9 S (L74 OR L76) (L) RACT+NT/RL AND L77
 L79 9 S (L40 OR L41 OR L15) (L) PREP+NT/RL AND L78
 L80 9 S L79 AND L65
 L81 25 S L69,L80

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=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 09:59:08 ON 14 NOV 2006

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FILE COVERS 1907 - 14 Nov 2006 VOL 145 ISS 21

FILE LAST UPDATED: 12 Nov 2006 (20061112/ED)

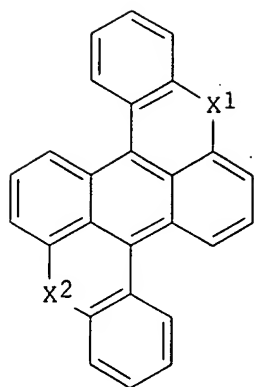
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This file contains CAS Registry Numbers for easy and accurate substance identification.

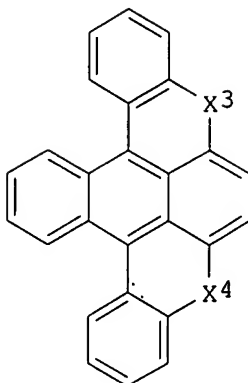
=> d l81 bib abs hitind hitstr retable tot

L81 ANSWER 1 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 2006:231768 HCAPLUS
 DN 144:301749
 TI Organic electroluminescent devices with ease of electron injection
 IN Yoshida, Masashi; Sasabe, Hiroyuki; Adachi, Chihaya;
 Tsuchida, Teppei; Kurata, Takaaki; Ikeda,
 Masaaki
 PA Nippon Kayaku Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 29 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006073809	A2	20060316	JP 2004-255628	20040902
PRAI	JP 2004-255628		20040902		
GI					

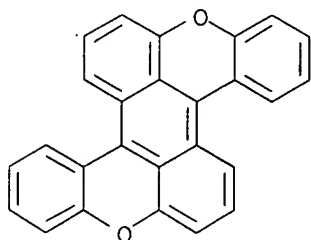


I



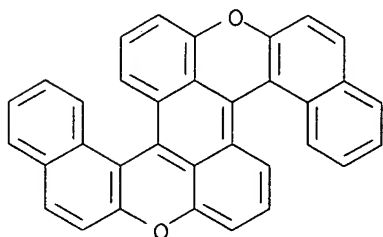
II

- AB The device contains pyranthrene derivs. having backbones expressed by I or II [X1-4 = O, S, Se, Te, NR29; NR29 = H, (substituted) aliphatic hydrocarbonyl residue, (substituted) aromatic residue] in electron-injection layer.
- CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
- IT **Electroluminescent devices**
(organic; organic electroluminescent devices containing pyranthrene in electron-injection layers)
- IT 191-90-2, Benzo[1,2,3-kl:4,5,6-k'l']dixanthene
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices containing pyranthrene in electron-injection layers)
- IT 191-90-2, Benzo[1,2,3-kl:4,5,6-k'l']dixanthene
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices containing pyranthrene in electron-injection layers)
- RN 191-90-2 HCAPLUS
- CN Benzo[1,2,3-kl:4,5,6-k'l']dixanthene (8CI, 9CI) (CA INDEX NAME)

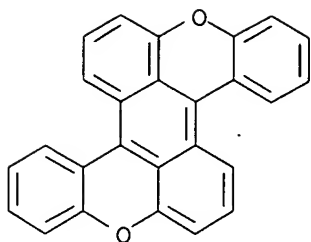


- L81 ANSWER 2 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
- AN 2005:137914 HCAPLUS
- DN 142:381817
- TI High-efficiency carrier injection characteristics of dixanthene derivatives in organic light-emitting diodes
- AU Yoshida, Masafumi; Tsuchida, Teppei; Kurata, Takaaki; Ikeda, Masaaki; Sasabe, Hiroyuki; Adachi, Chihaya
- CS Department of Photonics Materials Science, Chitose Institute of Science

- and Technology (CIST), Hokkaido, 066-8655, Japan
- SO Japanese Journal of Applied Physics, Part 1: Regular Papers, Short Notes & Review Papers (2005), 44(1A), 410-411
CODEN: JAPNDE
- PB Japan Society of Applied Physics
- DT Journal
- LA English
- AB Benzo[1,2,3-kL:4,5,6-k'l']dixanthene (BDX) derivs. show high-efficiency carrier injection in organic **light**-emitting diodes (OLEDs). Using 3,11-dibromobenzo[1,2,3-kL:4,5,6-k'l']dixanthene (BDX6) as a hole injection layer (HIL), the authors achieved a low driving voltage of 8.12 \pm 0.10 V in obtaining a c.d. of J = 100 mA/cm². The hole injection characteristics were superior to those of a **device** with a conventional CuPc layer as a H IL. However, inserting benzo[1,2,3-kL:4,5,6-k'l']dixanthene (BDX1) as an electron injection layer (EIL) efficiently decreased driving voltage, indicating a superior electron injection capability compared with a **device** without a BDX1 EIL. Carrier injection efficiency can be well controlled by the substituent groups of BDX, thus providing efficient hole and electron injection layers.
- CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 22, 76
- IT **Electroluminescent devices**
(high-efficiency carrier injection of dixanthene derivs. in organic LEDs)
- IT 188-05-6 191-90-2, Benzo[1,2,3-kl:4,5,6-k'l']dixanthene
191-92-4 117752-17-7 117752-18-8
733054-36-9 733054-37-0 733054-39-2
733054-40-5 733054-43-8 733054-44-9
849586-06-7
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(high-efficiency carrier injection of dixanthene derivs. in organic LEDs)
- IT 188-05-6 191-90-2, Benzo[1,2,3-kl:4,5,6-k'l']dixanthene
191-92-4 117752-17-7 117752-18-8
733054-36-9 733054-37-0 733054-39-2
733054-40-5 733054-43-8 733054-44-9
849586-06-7
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(high-efficiency carrier injection of dixanthene derivs. in organic LEDs)
- RN 188-05-6 HCAPLUS
- CN Dibenzo[a,a']benzo[1,2,3-kl:4,5,6-k'l']dixanthene (9CI) (CA INDEX NAME)

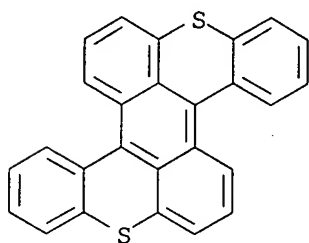


- RN 191-90-2 HCAPLUS
- CN Benzo[1,2,3-kl:4,5,6-k'l']dixanthene (8CI, 9CI) (CA INDEX NAME)



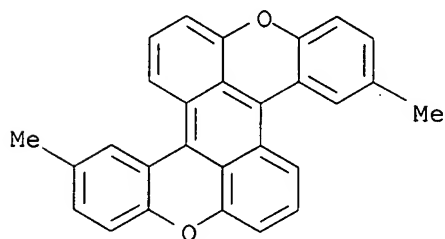
RN 191-92-4 HCAPLUS

CN Benzo[1,2,3-k:4,5,6-k']bisthioxanthene (8CI, 9CI) (CA INDEX NAME)



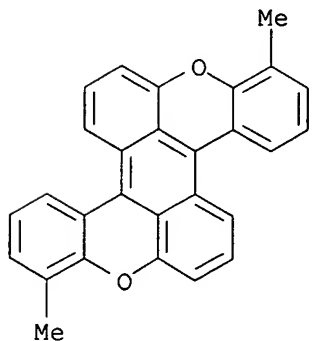
RN 117752-17-7 HCAPLUS

CN Benzo[1,2,3-k:4,5,6-k']dixanthene, 3,11-dimethyl- (9CI) (CA INDEX NAME)

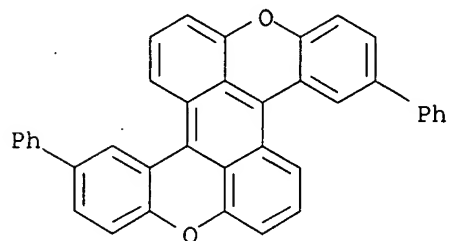


RN 117752-18-8 HCAPLUS

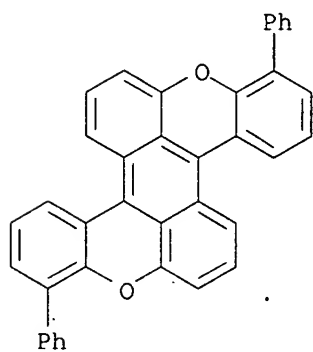
CN Benzo[1,2,3-k:4,5,6-k']dixanthene, 1,9-dimethyl- (9CI) (CA INDEX NAME)



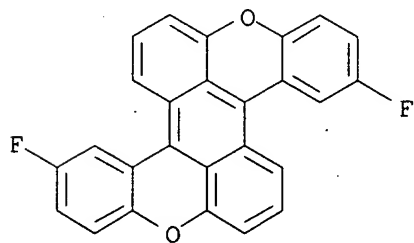
RN 733054-36-9 HCAPLUS
CN Benzo[1,2,3-k1:4,5,6-k'1']dixanthene, 3,11-diphenyl- (9CI) (CA INDEX NAME)



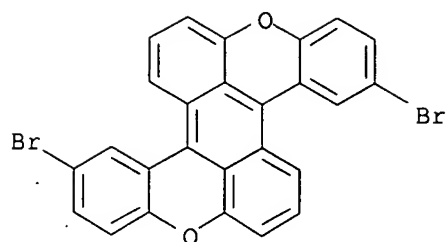
RN 733054-37-0 HCAPLUS
CN Benzo[1,2,3-k1:4,5,6-k'1']dixanthene, 1,9-diphenyl- (9CI) (CA INDEX NAME)



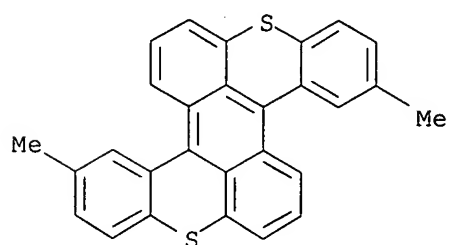
RN 733054-39-2 HCAPLUS
CN. Benzo[1,2,3-k1:4,5,6-k'1']dixanthene, 3,11-difluoro- (9CI) (CA INDEX NAME)



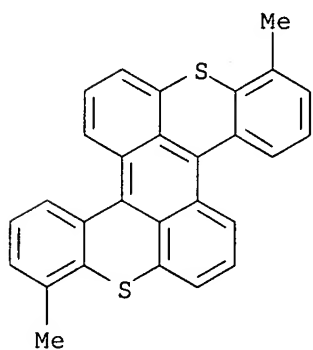
RN 733054-40-5 HCAPLUS
CN Benzo[1,2,3-k1:4,5,6-k'1']dixanthene, 3,11-dibromo- (9CI) (CA INDEX NAME)



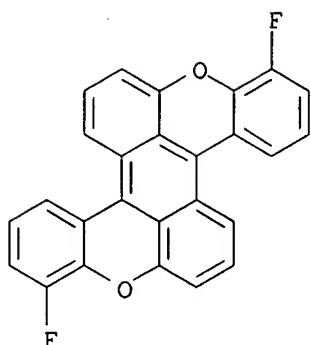
RN 733054-43-8 HCAPLUS
CN Benzo[1,2,3-k:4,5,6-k']bisthioxanthene, 3,11-dimethyl- (9CI) (CA INDEX NAME)



RN 733054-44-9 HCAPLUS
CN Benzo[1,2,3-k:4,5,6-k']bisthioxanthene, 1,9-dimethyl- (9CI) (CA INDEX NAME)



RN 849586-06-7 HCAPLUS
CN Benzo[1,2,3-k:4,5,6-k']dixanthene, 1,9-difluoro- (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Adachi, C	2001	2	37	Organic Electron	HCAPLUS
Brown, T	2000	77	3096	Appl Phys Lett	HCAPLUS
Bulovic, V	1997	70	2954	Appl Phys Lett	HCAPLUS
Clar, E	1956		2652	J Chem Soc	HCAPLUS
Giebeler, C	1999	85	608	J Appl Phys	HCAPLUS
Matsumura, M	1999	3797	283	Proc SPIE	HCAPLUS
Qiu, Y	2002	80	2628	Appl Phys Lett	HCAPLUS
Shirota, Y	1989	1989	1145	Chem Lett	
Stoel, M	2000	76	115	Appl Phys Lett	
Tokita, S	1998		97	Nippon Kagaku Kaishi	
van Slyke, S	1996	69	2160	Appl Phys Lett	HCAPLUS

L81 ANSWER 3 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:634013 HCAPLUS

DN 141:181656

TI **Light-emitting device** using condensed polycyclic compound and production method

IN Ikeda, Masaaki; Kurata, Takaaki; Tsuchida, Teppei; Adachi, Chihaya

PA Nippon Kayaku Kabushiki Kaisha, Japan

SO PCT Int. Appl., 107 pp.

CODEN: PIXXD2

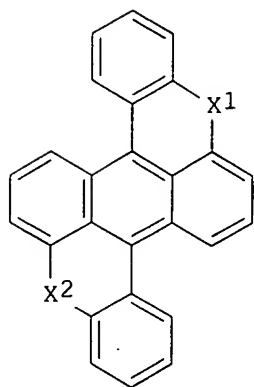
DT **Patent**

LA Japanese

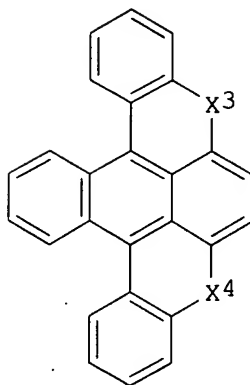
FAN.CNT 1

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PI	WO 2004065520	A1	20040805	WO 2004-JP306	20040116 <--
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	JP 2005108441	A2	20050421	JP 2003-305338	20030828 <--
	JP 2005272301	A2	20051006	JP 2003-382625	20031112 <--
	EP 1589089	A1	20051026	EP 2004-702858	20040116 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	CN 1738887	A	20060222	CN 2004-80002186	20040116 <--
	US 2006051612	A1	20060309	US 2005-542085	20050713 <--
PRAI	JP 2003-9304	A	20030117	<--	
	JP 2003-166799	A	20030611	<--	

OS JP 2003-172896 A 20030618 <--
 GI JP 2003-181925 A 20030626 <--
 JP 2003-305338 A 20030828 <--
 JP 2003-382625 A 20031112 <--
 WO 2004-JP306 W 20040116 <--
 MARPAT 141:181656



I



II

AB The invention refers to an electroluminescent device comprising an organic thin film including a luminescent layer containing at least one compound with the basic structure I or II [X1-4 = O, S, Se, Te or NR29; R29 = H, (un)substituted aliphatic hydrocarbon].
 IC ICM C09K0011-06
 ICS H05B0033-14; C07D0493-06; C07D0495-06
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 IT **Electroluminescent devices**
 (light-emitting device, condensed polycyclic compound and production method)
 IT Polycyclic compounds
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (light-emitting device, condensed polycyclic compound and production method)
 IT 191-90-2, Benzo[1,2,3-kl:4,5,6-k'l']dixanthene 191-92-4 733054-35-8
 RL: DEV (Device component use); USES (Uses)
 (light-emitting device, condensed polycyclic compound and production method)
 IT 188-05-6P 117752-17-7P 122528-36-3P 733054-36-9P 733054-37-0P 733054-38-1P 733054-39-2P 733054-40-5P 733054-41-6P 733054-42-7P 733054-43-8P 733054-44-9P 733054-45-0P 733054-46-1P 733054-47-2P
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 (light-emitting device, condensed polycyclic compound and production method)
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135-19-3, 2-Naphthol, reactions 324-94-7, 4-Fluoro-4'-hydroxybiphenyl
371-41-5, 4-Fluorophenol 604-44-4, 4-Chloro-1-naphthol 6093-03-4,
2,4-Diphenylphenol 90572-48-8 733054-51-8
733054-52-9 733054-53-0 733054-54-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(light-emitting device, condensed polycyclic compound
and production method)

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733054-49-4P 733054-50-7P 733054-55-2P

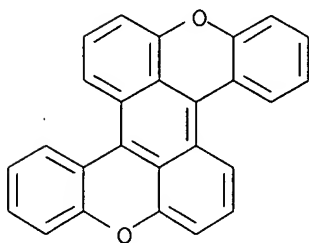
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and production method)

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733054-35-8

RL: DEV (Device component use); USES (Uses)
(light-emitting device, condensed polycyclic compound
and production method)

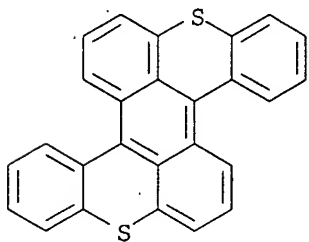
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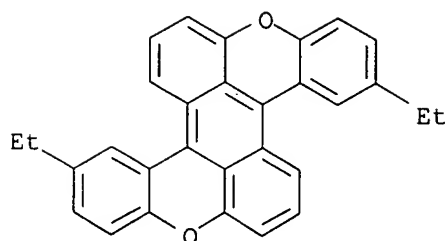
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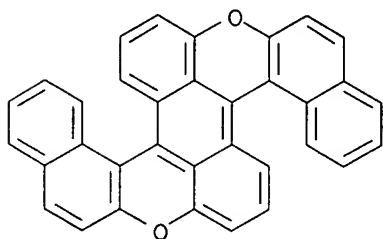


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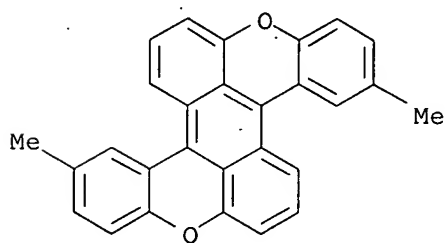
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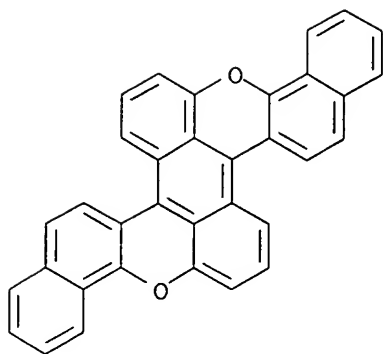
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 733054-36-9P 733054-37-0P 733054-38-1P
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 733054-42-7P 733054-43-8P 733054-44-9P
 733054-45-0P 733054-46-1P 733054-47-2P
 RL: DEV (Device component use); SPN (Synthetic
 preparation); PREP (Preparation); USES (Uses)
 (light-emitting device, condensed polycyclic compound
 and production method)
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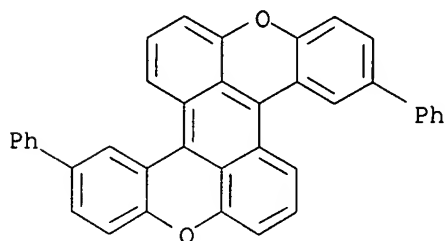
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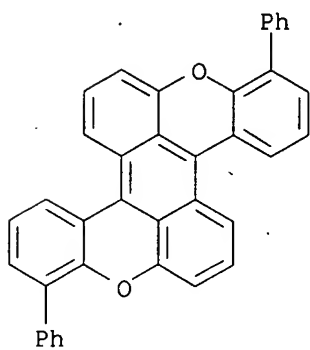
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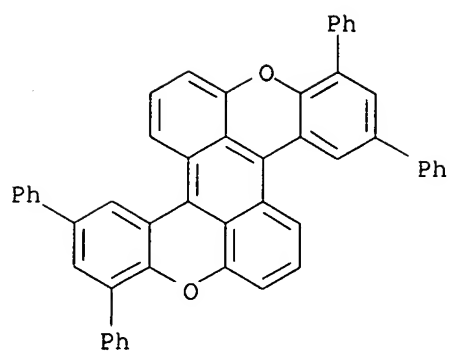
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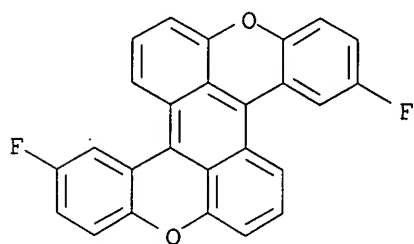
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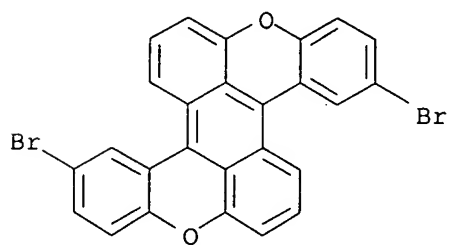
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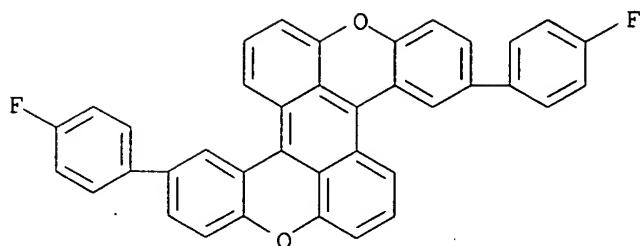
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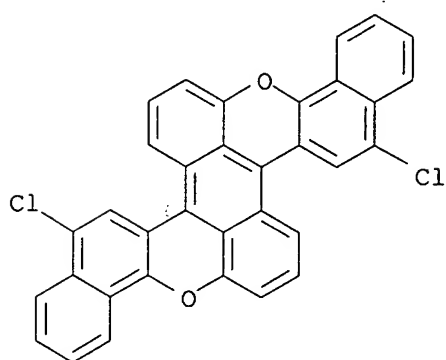
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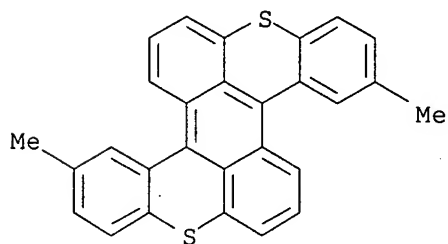
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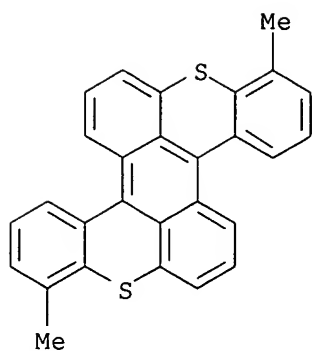
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(CA INDEX NAME)



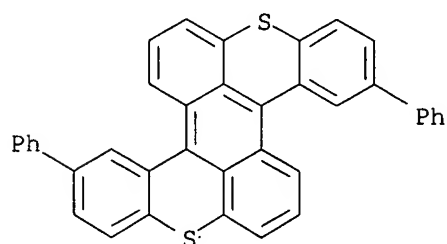
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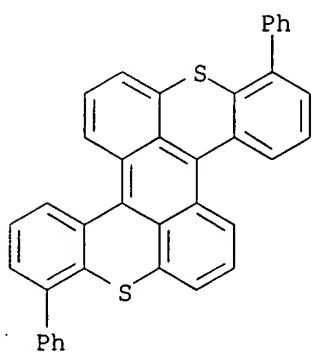
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NAME)



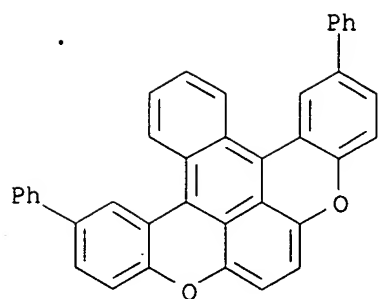
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RN 733054-46-1 HCAPLUS
CN Benzo[1,2,3-k:4,5,6-k']bisthioxanthene, 1,9-diphenyl- (9CI) (CA INDEX NAME)



RN 733054-47-2 HCAPLUS
CN Dibenzo[3,4:5,6][2]benzopyrano[7,8,1-mna]xanthene, 2,11-diphenyl- (9CI) (CA INDEX NAME)



IT 90572-48-8 733054-51-8 733054-52-9

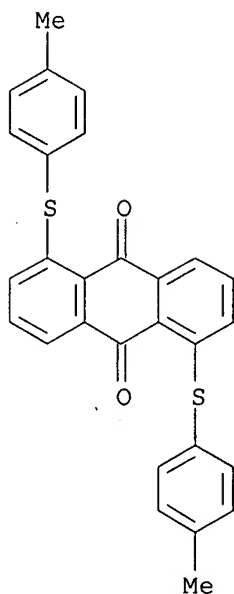
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RL: RCT (Reactant); RACT (Reactant or reagent)

(light-emitting device, condensed polycyclic compound
and production method)

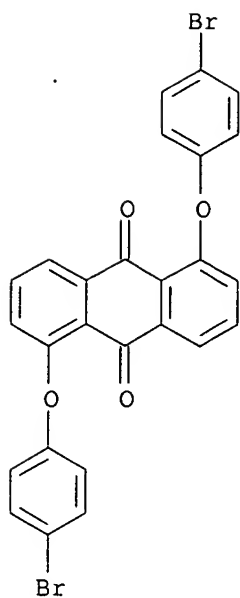
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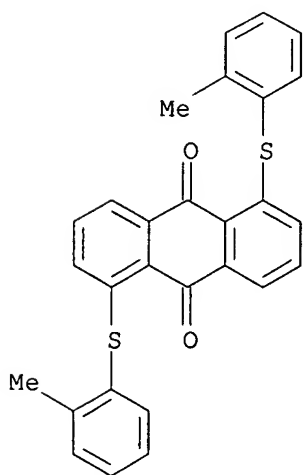


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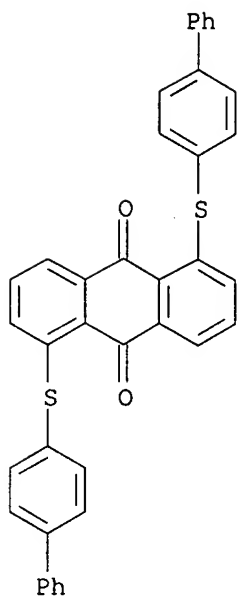
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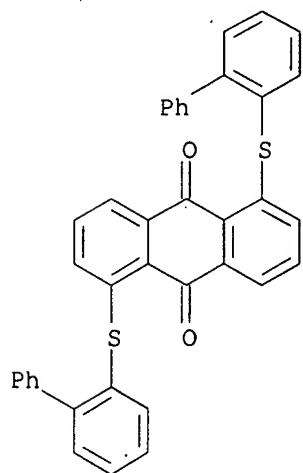
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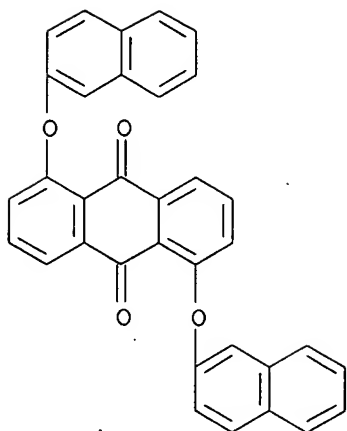
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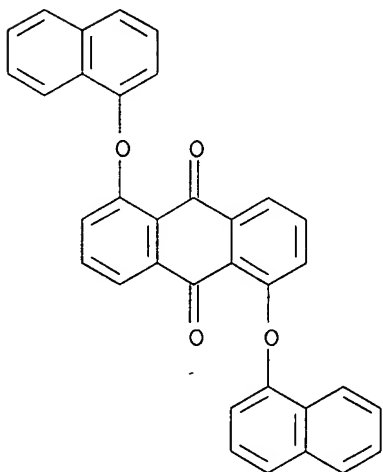


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 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)
 (light-emitting device, condensed polycyclic compound
 and production method)
 RN 103282-08-2 HCAPLUS
 CN 9,10-Anthracenedione, 1,5-bis(2-naphthalenyloxy)- (9CI) (CA INDEX NAME)



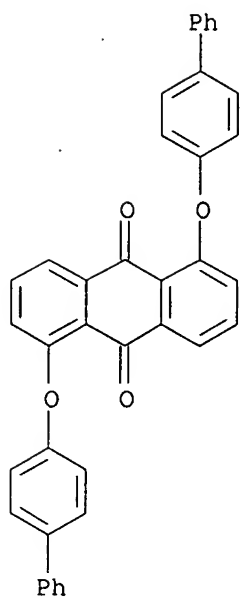
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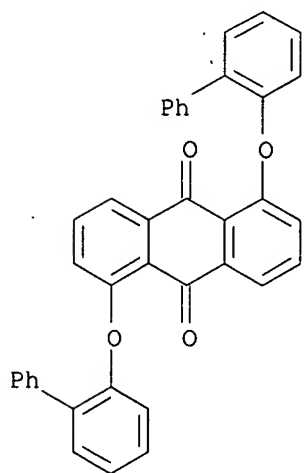


RN 733054-48-3 HCAPLUS

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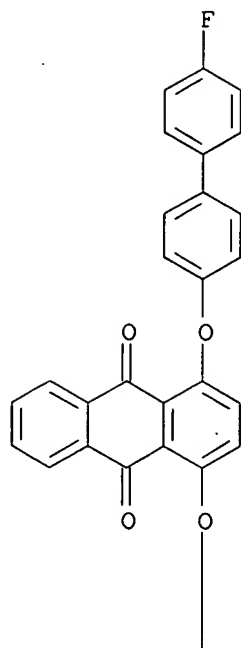


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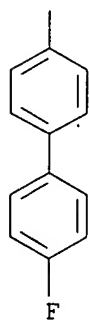


RN 733054-50-7 HCAPLUS
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 (CA INDEX NAME)

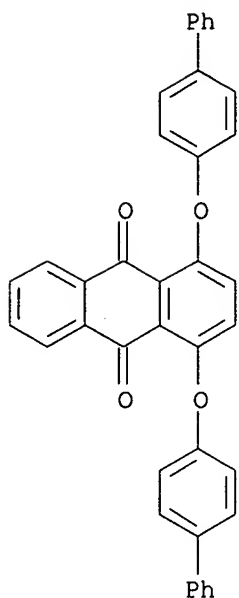
PAGE 1-A



PAGE 2-A



RN 733054-55-2 HCAPLUS
 CN 9,10-Anthracenedione, 1,4-bis([1,1'-biphenyl]-4-yloxy)- (9CI) (CA INDEX
 NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Christensen, J	1991	42	2311	Synthetic Metals	HCAPLUS
Minnesota Mining And Ma	1994			JP 07-9766 A	HCAPLUS
Minnesota Mining And Ma	1994			EP 629512 A2	HCAPLUS
Mitsubishi Kasei Corp	1993			JP 05-222362 A	HCAPLUS
Tokita, S	1988		814	Journal of the Chemi	HCAPLUS
Tokita, S	1989		876	Journal of the Chemi	HCAPLUS
Tokita, S	1992		1097	Journal of the Chemi	HCAPLUS
Tokita, S	1997	297	269	Mol Cryst Liq Cryst	HCAPLUS
Watanabe, T	1998	11	41	J Photoholymer Sci a	HCAPLUS

L81 ANSWER 4 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:764167 HCAPLUS

DN 134:63356

TI Study on the orientation of benzodixanthene analogue having alkyl chain in
Langmuir-Blodgett film

AU Watanabe, Tomohiro; Nakahara, Hiroo; Tokita, Sumio

CS Department of Applied Chemistry, Faculty of Engineering, Saitama
University, Saitama, 338-8570, Japan

SO Molecular Crystals and Liquid Crystals Science and Technology, Section A:
Molecular Crystals and Liquid Crystals (2000), 345, 143-148
CODEN: MCLCE9; ISSN: 1058-725X

PB Gordon & Breach Science Publishers

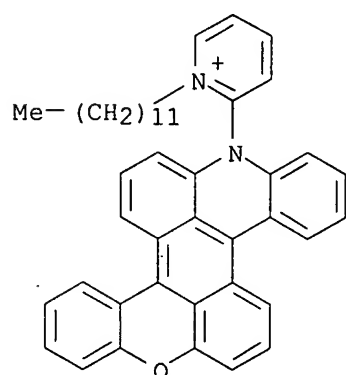
DT Journal

LA English

AB Xantheno[1', 9': 4, 5, 6]benzo[1, 2, 3-kL]N-(1-dodecyl-2-pyridinium)-
acridine iodide (2a) was synthesized from 1,5-dichloroanthraquinone in six
steps. The polarized UV-visible spectra of the LB film of (2a) on CaF₂
were compared with the transition moments of (2a) calculated by semi-empirical
MO method to discuss the orientation of (2a) in the LB film. The plane of
the skeleton structure of the polycondensed aromatic ring of (2a) on CaF₂ in
the LB film was rather oblique, not parallel to the CaF₂ surface.

CC 73-4 (Optical, Electron, and Mass Spectroscopy and Other Related

Properties)
 IT 314075-01-9
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses) (orientation of benzodixanthene analog having alkyl chain in Langmuir-Blodgett film)
 IT 314075-01-9
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses) (orientation of benzodixanthene analog having alkyl chain in Langmuir-Blodgett film)
 RN 314075-01-9 HCAPLUS
 CN Pyridinium, 1-dodecyl-2-(16H-dibenzo[1,8:3,4][2]benzopyrano[5,6,7-kl]acridin-16-yl)-, iodide (9CI) (CA INDEX NAME)



● I⁻

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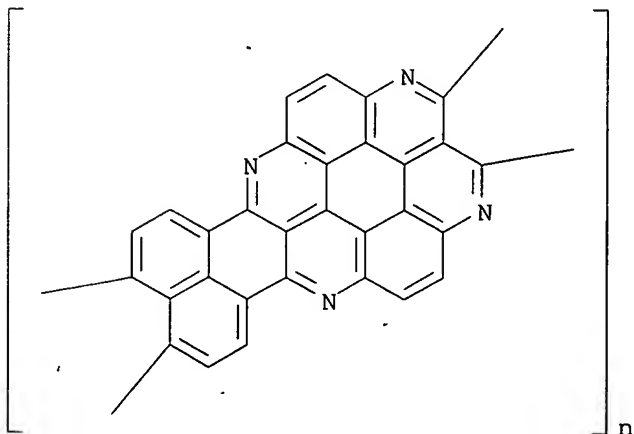
Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Bacov, A	1979	53	21	Theor Chim Acta	
Brauer, H	1990		631	Photochromism-Molecu	HCAPLUS
Dewar, M	1985	107	3902	J Am Chem Soc	HCAPLUS
Jesse, K	1991	95	1311	J Phys Chem	HCAPLUS
Ridley, J	1973	32	111	Theor Chim Acta	HCAPLUS
Schmidt, R	1982	18	365	J Photochem	HCAPLUS
Tokita, S	1996	28	135	Kikan Kagaku Sosetsu	HCAPLUS
Tokita, S	1997	297	269	Mol Cryst Liq Cryst	HCAPLUS
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Watanabe, T	1997	10	255	J Photopolym Sci Tec	HCAPLUS
Watanabe, T	1998	11	41	J Photopolym Sci Tec	HCAPLUS
Watanabe, T	1997	298	1	Mol Cryst Liq Cryst	
Zerner, M	1980	102	589	J Am Chem Soc	HCAPLUS

L81 ANSWER 5 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
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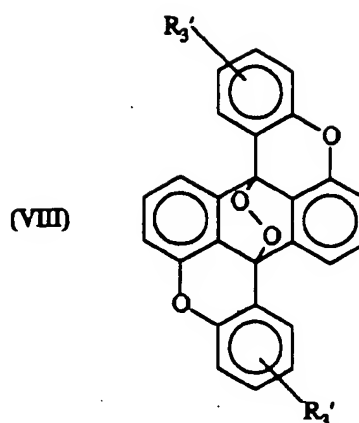
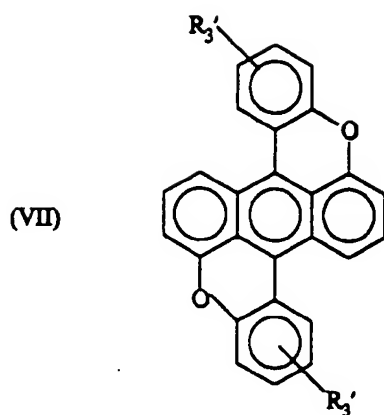
DN 133:200688
 TI Organic LED devices
 IN Takayama, Koichi; Kawakami, Yasuyuki; Ogawa, Akiyo; Tanaka, Shinichi;
 Komatsu, Yuki; Jinde, Yukitoshi
 PA Stanley Electric Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000243575	A2	20000908	JP 1999-42136	19990219 <--
PRAI	JP 1999-42136		19990219 <--		

AB The devices comprise: (1) a glass substrate; (2) an ITO electrode; (3) a hole-injecting/transport layer; (4) an Alq3 phosphor layer; and (5) a MgAg electrode layer, where (3) comprises poly(phenaleno[1,2,3-ij]anthra[1,9,8-cdef:4,10,5-c'd'e'f']di[2,7]naphth pyridine-2,3:10,11-tetrayl) obtained by a vapor phase polymerization of (1,4,5,8)-tetra aminoanthraquinone and (1,3,6,8)-tetraketo-(1,3,3,6,7,8)-hexahydropyrene.
 IC ICM H05B0033-22
 ICS C09K0011-06; H01L0033-00; H05B0033-10; H05B0033-14
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 IT 2085-33-8, Tris(8-quinolinolato)aluminum 2475-45-8, (1,4,5,8)-Tetraaminoanthraquinone 34557-83-0 35147-76-3, 1,3,6,8(2H,7H)-Pyrenetetrone 37271-44-6 50926-11-9, ITO
 RL: DEV (Device component use); USES (Uses)
 (organic LED devices)
 IT 34557-83-0
 RL: DEV (Device component use); USES (Uses)
 (organic LED devices)
 RN 34557-83-0 HCAPLUS
 CN Poly(phenaleno[1,2,3-ij]anthra[1,9,8-cdef:4,10,5-c'd'e'f']di[2,7]naphthyridine-2,3:10,11-tetrayl) (9CI) (CA INDEX NAME)

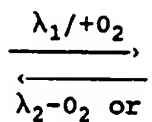
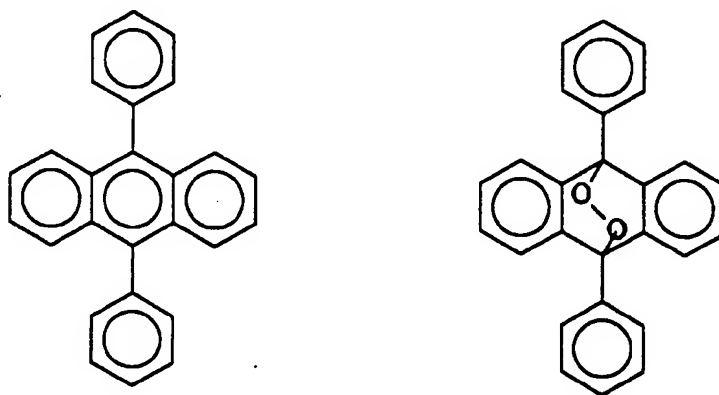


L81 ANSWER 6 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 2000:345016 HCAPLUS
 DN 133:128333
 TI Role of Si/film interface in photovoltaic devices based on aromatic



or its methyl derivative, or a corresponding endoperoxide thereof.

The above-mentioned aromatic polycyclic compound forms a corresponding endoperoxide with the irradiation of a light having a wavelength of λ_1 in the presence of oxygen, which further forms the original aromatic polycyclic compound by heating or with the irradiation of a light having a wavelength of λ_2 , as represented by the following reaction mechanism:



Compounds exhibiting such a reaction are described in H. Durr, H. Bouas-Laurent, editors, "Photochromism" (1990), Chapter 15.

Consequently, the color material according to the present invention can be decolored with the irradiation of a strong light in the presence of oxygen, and then colored by a heating means, such as a thermal head. The colored material of this invention is very stable in comparison to conventional recording materials using spiropyran, spirooxazine and fulgides, but decolored with a strong light, for example, of 1 to 1000 J/cm². Accordingly, the color material of the present invention has a high stability in a room light and can be used repeatedly.

As can be understood from the above reaction mechanism, the coloration takes place by entailing the discharge of oxygen on one hand, and the decoloration takes place by entailing the absorption of oxygen. Consequently, to accelerate the decoloration a binder having a high oxygen permeability is preferably used, and to lower the decoloration a binder having a low oxygen permeability is preferably used.

The amount of the above aromatic polycyclic compound or the endoperoxide to be used is in the range of 0.1 to 30 parts by weight, preferably 1 to 20 parts by weight, based on 100 parts by weight of the binder resin. If the amount is too small, the color density is not sufficient, and if it is too large, the dissolution in the binder

molecular films

AU Komolov, A.; Schaumburg, K.

CS Research Institute for Physics, St. Petersburg State University, St. Petersburg, Russia

SO Synthetic Metals (2000), 113(3), 217-221
CODEN: SYMEDZ; ISSN: 0379-6779

PB Elsevier Science S.A.

DT Journal

LA English

AB Sandwich structures based on cast films of poly(3-dodecylthiophene) (PDDT) and multilayer Langmuir-Blodgett (LB) corbathiene films are studied under ambient conditions. The two types of the structures demonstrate similar photovoltaic properties. Photovoltage and photocond. are particularly distinguishable when n-Si substrate is used in the structures. Two photovoltaic components are observed: caused by light absorption in the film and caused by light absorption in n-Si substrate. Donor-acceptor interaction at film/n-Si interface superposed on rigid-band approach is used to suggest mechanisms of the phenomena observed. The mechanisms may be used in order to provide a low work function electrode for organic light emitting diodes.

CC 76-5 (Electric Phenomena)
Section cross-reference(s): 38, 73

IT **Electroluminescent devices**
(electrodes; role of Si/film interface in photovoltaic devices based on aromatic mol. films)

IT **Electrodes**
(for LEDs; role of Si/film interface in photovoltaic devices based on aromatic mol. films)

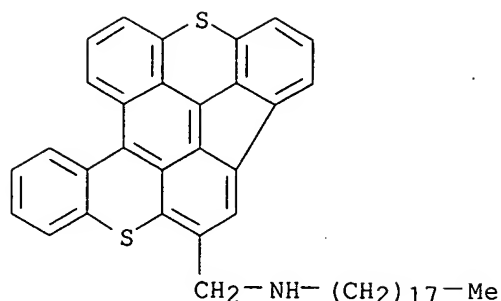
IT Electric current-potential relationship
Electron acceptors
Electron donors
Langmuir-Blodgett multilayers
Photoconductivity
Photoelectric devices
Photovoltage
Solid-solid interface
(role of Si/film interface in photovoltaic devices based on aromatic mol. films)

IT 7440-21-3, Silicon, uses 104934-53-4, Poly(3-dodecylthiophene)
171740-93-5, Corbathiene
RL: DEV (Device component use); USES (Uses)
(role of Si/film interface in photovoltaic devices based on aromatic mol. films)

IT 171740-93-5, Corbathiene
RL: DEV (Device component use); USES (Uses)
(role of Si/film interface in photovoltaic devices based on aromatic mol. films)

RN 171740-93-5 HCAPLUS

CN Indeno[2,1,6,7-klmn:5,4,3-m'n'a']bisthioxanthene-5-methanamine,
N-octadecyl- (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Baigent, D	1994	67	3	Synth Met	HCAPLUS
Birgersson, J	1996	80	125	Synth Met	HCAPLUS
Bube, R	1992			Photoelectronic Prop	
Furund, T	1988	160	145	Thin Solid Films	
Heeger, A	1994	67	23	Synth Met	HCAPLUS
Karg, S	1993	54	427	Synth Met	HCAPLUS
Karl, N	1994	252	243	Mol Cryst Liq Cryst	
Komolov, A	1999	142	591	Appl Surf Sci	HCAPLUS
Komolov, A	1997	10	41	Phys Low-Dimens Stru	
Komolov, A	1997	8/9	81	Phys Low-Dimens Stru	
Komolov, A	1999	1/2	135	Phys Low-Dimens Stru	
Komolov, A	1999	105	29	Synth Met	HCAPLUS
Komolov, A	1997	293	159	Thin Solid Films	HCAPLUS
Komolov, A	1997	311	259	Thin Solid Films	
Kugler, T	1992	260	64	Surf Sci	HCAPLUS
Lazneva, E	1997	10	71	Phys Low-Dimens Stru	
Mott, H	1979			Electron Processes i	
Nechtstein, M	1994		647	Organic Conductors	
Nevin, W	1989	85	1729	J Chem Soc, Faraday	HCAPLUS
Nsengiyumva, S	1994	243	505	Thin Solid Films	HCAPLUS
Parker, I	1994	75	1656	J Appl Phys	HCAPLUS
Petty, M	1996			LB films	
Piancastelli, M	1989	72	635	Solid State Commun	HCAPLUS
Rumbles, G	1996	76	47	Synth Met	HCAPLUS
Salaneck, W	1996		11	Conjugated Polymer S	
Yang, Y	1997		31	MRS Bulletin	
Ziegler, C	1997		677	Handbook of Organic	

L81 ANSWER 7 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:381566 HCAPLUS

DN 131:152474

TI Photovoltage and photoconductivity in Si/organic film/metal structures
with films made of poly(3-alkylthiophene) molecules and polycyclic
conjugated molecules

AU Komolov, Alexei; Schaumburg, Kjeld; Monakhov, Vadim

CS Research Institute for Physics, St. Petersburg State University, St.
Petersburg, Russia

SO Synthetic Metals (1999), 105(1), 29-33

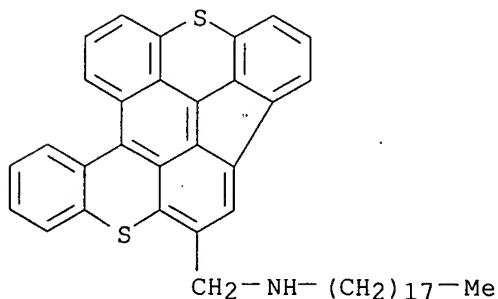
CODEN: SYMEDZ; ISSN: 0379-6779

PB Elsevier Science S.A.

DT Journal

LA English

- AB Photovoltage and photocond. in sandwich thin-film **devices** based on cast regio-regular poly(3-dodecylthiophene) and multilayer Langmuir-Blodgett corbathiene films were exptl. studied. N-Si and p-Si substrates and Al and Au top electrodes were used in the **devices**. Photovoltage values attained 0.6 V, and photocurrents were 10 times bigger than dark currents under monochromatic visible **light** irradiation with total energy d. less than 0.1 mW/cm². The most pronounced photoresponse component was observed in the incident quanta range around 1.5 eV but only for the **devices** with n-Si substrate. This fact was accounted for by photovoltaic processes in the chemical formed film/n-Si interface where a neg. elec. charge is captured. Photovoltage vs. **light** intensity dependencies measured are in good agreement with this concept. Photovoltage and photocond. spectra of LB corbathiene film-based **devices** have a less pronounced peak corresponding to the films' π - π^* transitions. A less pronounced peak in the spectra of poly(3-dodecylthiophene) film-based **devices** has a shift below the films' π - π^* transition energy. That may indicate possible bipolaron formation in the polymer material. The data are further interpreted in terms of energy-band diagrams of the **devices**.
- CC 76-5 (Electric Phenomena)
- IT 7429-90-5, Aluminum, properties 7440-21-3, Silicon, properties 7440-57-5, Gold, properties 104934-53-4, Poly(3-dodecylthiophene) 171740-93-5, Corbathiene
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (photocond. in Si/organic film/metal structures with films made of poly(3-alkylthiophene) mols. and polycyclic conjugated mols.)
- IT 171740-93-5, Corbathiene
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (photocond. in Si/organic film/metal structures with films made of poly(3-alkylthiophene) mols. and polycyclic conjugated mols.)
- RN 171740-93-5 HCAPLUS
- CN Indeno[2,1,6,7-klmn:5,4,3-m'n'a']bisthioxanthene-5-methanamine, N-octadecyl- (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Bjornholm, T	1996	8/11	920	Adv Mater	
Bredas, J	1985	83	1323	J Chem Phys	HCAPLUS
Bredas, J	1984	29	6761	Phy Rev B	HCAPLUS
Heeger, A	1994	67	23	Synth Met	HCAPLUS
Kaneko, F	1989	179	121	Thin Solid Films	HCAPLUS
Kanincki, J	1986		544	Handbook of Conducti	
Komolov, A	1998			Appl Surf Sci in pre	
Komolov, A	1997	10	41	Phys Low-Dimens Stru	

Komolov, A	1997	10	71	Phys Low-Dimens Stru	
Komolov, A	1997	8-9	81	Phys Low-Dimens Stru	
Komolov, A	1999	1/2	135	Phys Low-Dimens Stru	
Komolov, A	1997	311	259	Thin Solid Films	HCAPLUS
Kugler, T	1992	260	64	Surf Sci	HCAPLUS
Kvarnstrom, C	1997		508	Handbook of Organic	
Lachkar, A	1994	66	209	Synth Met	HCAPLUS
Nechtstein, M	1994		647	Organic Conductors	
Parker, I	1994	75	1656	J Appl Phys	HCAPLUS
Petty, M	1996			LB Films	
Poplawski, J	1993	54	113	Synth Met	HCAPLUS
Salaneck, W	1996		1	Conjugated Polymer S	
Schaumburg, K	1997	299	161	Thin Solid Films	HCAPLUS
Sze, S	1981			Physics of Semicondu	
Ziegler, C	1997		677	Handbook of Organic	

L81 ANSWER 8 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN

AN ~~1998-472169~~ HCAPLUS

DN 129:202602

TI Photochromic properties of benzodixanthene analogs having alkyl group and their Langmuir-Blodgett films

AU Watanabe, Tomohiro; Yanashima, Chizuko; Kawashima, Takeshi; Nakahara, Hiroo; Tokita, Sumio

CS Dep. of Applied Chemistry, Faculty of Engineering, Saitama University, Urawa, Saitama, 338-8570, Japan

SO Journal of Photopolymer Science and Technology (1998), 11(1), 41-46

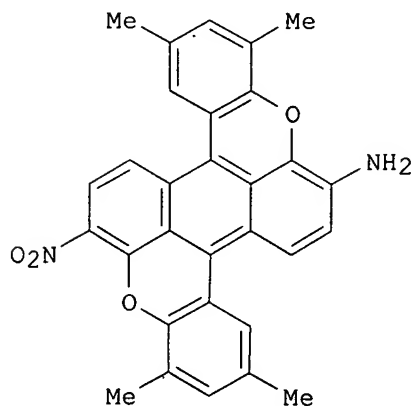
CODEN: JSTEEW; ISSN: 0914-9244

PB Technical Association of Photopolymers, Japan

DT Journal

LA English

GI



I

AB Benzo[1,2,3,-kl:4,5-6-k'l']dixanthene derivative I was synthesized from 1,5-dichloroanthraquinone in four steps. After quaternization with iodoalkane, photochromic properties of monolayers on water surface and LB films on quartz glass were investigated.

CC 22-7 (Physical Organic Chemistry)

Section cross-reference(s): 41, 66, 74

IT 193629-49-1 212121-75-0 212121-76-1

RL: FMU (Formation, unclassified); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)

(photochromic properties of Langmuir-Blodgett films of quaternized benzodixanthene derivs.)

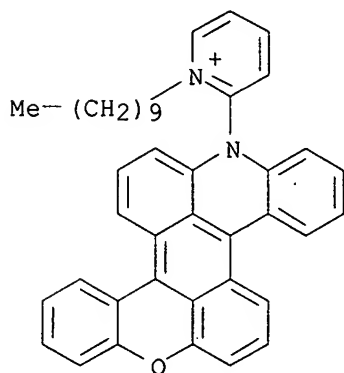
IT 212121-70-5P 212121-71-6P 212121-72-7P
212121-73-8P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation)
; PREP (Preparation); RACT (Reactant or reagent)
(photochromic properties of Langmuir-Blodgett films of quaternized benzodixanthene derivs.)

IT 212121-69-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(photochromic properties of Langmuir-Blodgett films of quaternized benzodixanthene derivs.)

IT 193629-49-1
RL: FMU (Formation, unclassified); PRP (Properties); RCT (Reactant); FORM
(Formation, nonpreparative); RACT (Reactant or reagent)
(photochromic properties of Langmuir-Blodgett films of quaternized benzodixanthene derivs.)

RN 193629-49-1 HCAPLUS

CN Pyridinium, 1-decyl-2-(16H-dibenzo[1,8:3,4][2]benzopyrano[5,6,7-kl]acridin-16-yl)-, iodide (9CI) (CA INDEX NAME)

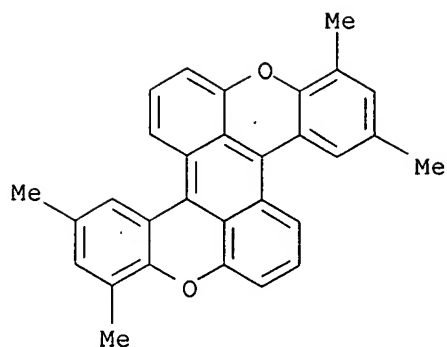


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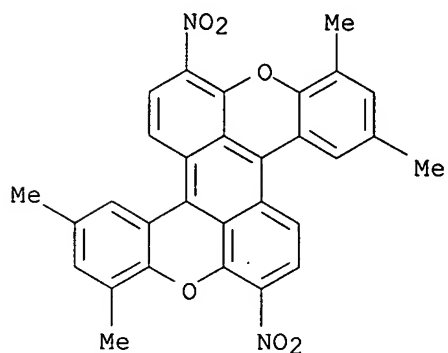
IT 212121-70-5P 212121-71-6P 212121-72-7P
212121-73-8P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation)
; PREP (Preparation); RACT (Reactant or reagent)
(photochromic properties of Langmuir-Blodgett films of quaternized benzodixanthene derivs.)

RN 212121-70-5 HCAPLUS

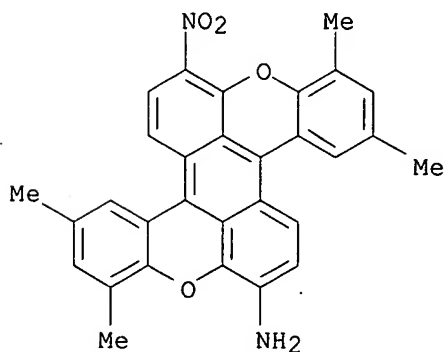
CN Benzo[1,2,3-kl:4,5,6-k'l']dixanthene, 1,3,9,11-tetramethyl- (9CI) (CA INDEX NAME)



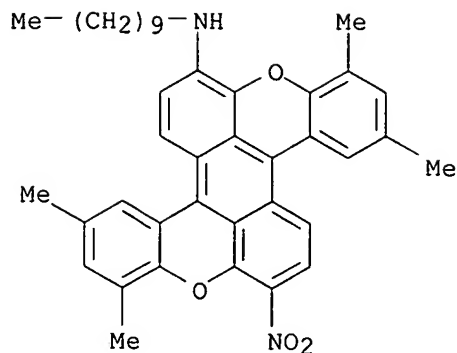
RN 212121-71-6 HCAPLUS
 CN Benzo[1,2,3-k1:4,5,6-k'1']dixanthene, 1,3,9,11-tetramethyl-7,15-dinitro-
 (9CI) (CA INDEX NAME)



RN 212121-72-7 HCAPLUS
 CN Benzo[1,2,3-k1:4,5,6-k'1']dixanthene-7-amine, 1,3,9,11-tetramethyl-15-nitro-
 (9CI) (CA INDEX NAME)



RN 212121-73-8 HCAPLUS
 CN Benzo[1,2,3-k1:4,5,6-k'1']dixanthene-7-amine, N-decyl-1,3,9,11-tetramethyl-
 15-nitro-, monohydriodide (9CI) (CA INDEX NAME)



● HI

IT 212121-69-2P

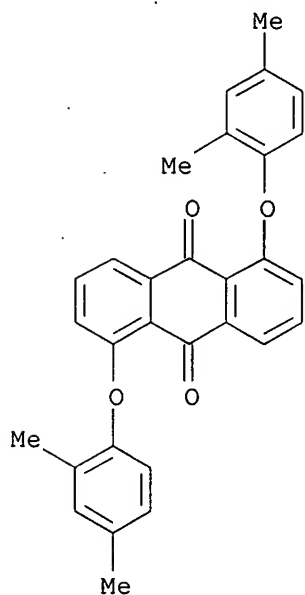
RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(photochromic properties of Langmuir-Blodgett films of quaternized benzodioxanthene derivs.)

RN 212121-69-2 HCAPLUS

CN 9,10-Anthracenedione, 1,5-bis(2,4-dimethylphenoxy)- (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Bacov, A	1979	53	21	Theor Chim Acta	
Dewar, M	1985	107	3902	J Am Chem Soc	HCAPLUS
Kobayashi, Y	1992		425	Proc 2nd International	
Purvis, G	1995		24	3rd International Sy	
Ridley, J	1973	32	111	Theor Chim Acta	HCAPLUS

Schmidt, R	1982	18	365	J Photochem	HCAPLUS
Tokita, S	1982		115	Color Chemistry	
Tokita, S	1991	4	41	J Photopolym Sci Tec	HCAPLUS
Tokita, S	1992	5	533	J Photopolym Sci Tec	HCAPLUS
Tokita, S	1996	28	135	Kikan Kagaku Sosetsu	HCAPLUS
Tokita, S	1997	297	269	Mol Cryst Liq Cryst	HCAPLUS
Tokita, S	1992		428	Proc 2nd International	
Watanabe, T	1997	10	255	J Photopolym Sci Tec	HCAPLUS
Watanabe, T	1997	298	1	Mol Cryst Liq Cryst	
Zerner, M	1980	102	589	J Am Chem Soc	HCAPLUS

L81 ANSWER 9 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:468807 HCAPLUS

DN 127:161718

TI Synthesis of photochromic benzodixanthene analogs with 2-pyridyl group and formation of monolayers on water surface

AU Watanabe, Tomohiro; Yamakawa, Gen; Tokita, Sumio; Nakahara, Hiroo

CS Department of Applied Chemistry, Faculty of Engineering, Saitama University, Urawa, 338, Japan

SO Journal of Photopolymer Science and Technology (1997), 10(2), 255-260

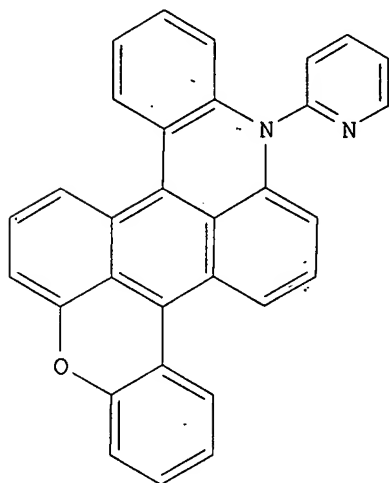
CODEN: JSTEED; ISSN: 0914-9244

PB Technical Association of Photopolymers, Japan

DT Journal

LA English

GI



I

AB A nitrogen analog (I) of benzo[1,2,3-kl:4,5,6-k'l']dixanthene with a 2-pyridyl group was synthesized from 1,5-dichloroanthraquinone in six steps. After quaternization with iodoalkane, photochromic properties were investigated in ethanol or in toluene. The compound having a decyl group formed a monolayer on water surface at 10°C.

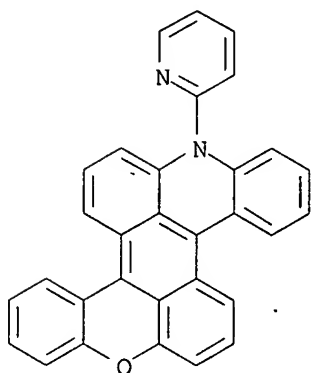
CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 74

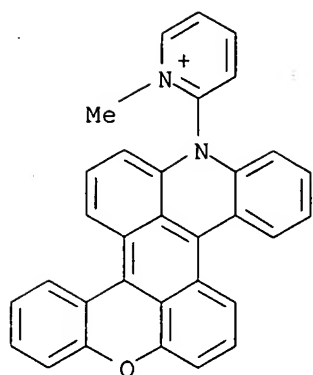
IT 193629-45-7P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)

(preparation of photochromic benzodixanthene nitrogen analogs)
 IT 193629-46-8P 193629-47-9P 193629-48-0P
 193629-49-1P
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);
 SPN (Synthetic preparation); PREP (Preparation); PROC
 (Process)
 (preparation of photochromic benzodixanthene nitrogen analogs)
 IT 191-90-2, Benzo[1,2,3-kl:4,5,6-k'l']dixanthene 193629-44-6
 RL: PRP (Properties)
 (preparation of photochromic benzodixanthene nitrogen analogs)
 IT 66011-93-6P 193629-50-4P 193629-51-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)
 (preparation of photochromic benzodixanthene nitrogen analogs)
 IT 193629-45-7P
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT
 (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); PROC (Process); RACT (Reactant or reagent)
 (preparation of photochromic benzodixanthene nitrogen analogs)
 RN 193629-45-7 HCAPLUS
 CN 16H-Dibenzo[1,8:3,4][2]benzopyrano[5,6,7-kl]acridine, 16-(2-pyridinyl)-
 (9CI) (CA INDEX NAME)

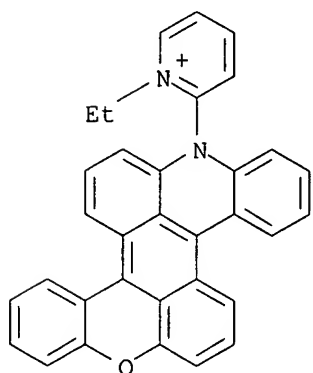


IT 193629-46-8P 193629-47-9P 193629-48-0P
 193629-49-1P
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);
 SPN (Synthetic preparation); PREP (Preparation); PROC
 (Process)
 (preparation of photochromic benzodixanthene nitrogen analogs)
 RN 193629-46-8 HCAPLUS
 CN Pyridinium, 2-(16H-dibenzo[1,8:3,4][2]benzopyrano[5,6,7-kl]acridin-16-yl)-
 1-methyl-, iodide (9CI) (CA INDEX NAME)



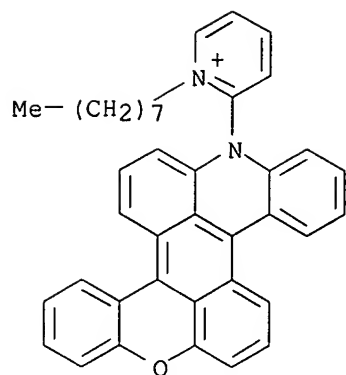
● I⁻

RN 193629-47-9 HCAPLUS
CN Pyridinium, 2-(16H-dibenzo[1,8:3,4][2]benzopyrano[5,6,7-kl]acridin-16-yl)-
1-ethyl-, iodide (9CI) (CA INDEX NAME)



● I⁻

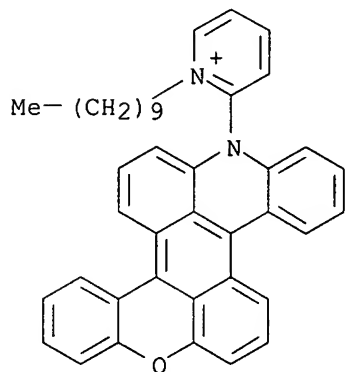
RN 193629-48-0 HCAPLUS
CN Pyridinium, 2-(16H-dibenzo[1,8:3,4][2]benzopyrano[5,6,7-kl]acridin-16-yl)-
1-octyl-, iodide (9CI) (CA INDEX NAME)



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RN 193629-49-1 HCAPLUS

CN Pyridinium, 1-decyl-2-(16H-dibenzo[1,8:3,4][2]benzopyrano[5,6,7-kl]acridin-16-yl)-, iodide (9CI) (CA INDEX NAME)



● I⁻

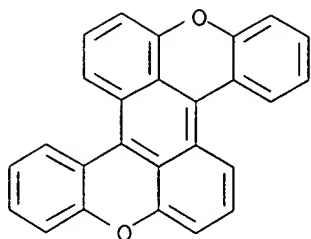
IT 191-90-2, Benzo[1,2,3-kl:4,5,6-k'l']dixanthene 193629-44-6

RL: PRP (Properties)

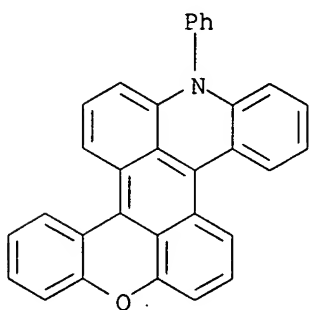
(preparation of photochromic benzodixanthene nitrogen analogs)

RN 191-90-2 HCAPLUS

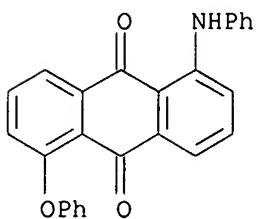
CN Benzo[1,2,3-kl:4,5,6-k'l']dixanthene (8CI, 9CI) (CA INDEX NAME)



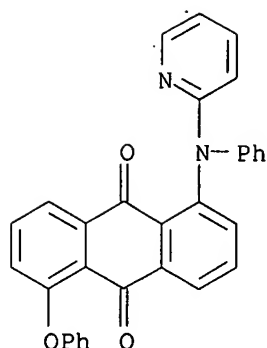
RN 193629-44-6 HCAPLUS
 CN 16H-Dibenzo[1,8:3,4][2]benzopyrano[5,6,7-kl]acridine, 16-phenyl- (9CI)
 (CA INDEX NAME)



IT 193629-50-4P 193629-51-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)
 (preparation of photochromic benzodixanthene nitrogen analogs)
 RN 193629-50-4 HCAPLUS
 CN 9,10-Anthracenedione, 1-phenoxy-5-(phenylamino)- (9CI) (CA INDEX NAME)



RN 193629-51-5 HCAPLUS
 CN 9,10-Anthracenedione, 1-phenoxy-5-(phenyl-2-pyridinylamino)- (9CI) (CA
 INDEX NAME)



L81 ANSWER 10 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 1997:462122 HCAPLUS
 DN 127:227202
 TI Molecular design and synthesis of novel analogs of benzodixanthene and anthradichromene
 AU Tokita, Sumio; Watanabe, Tomohiro; Fujita, Yuuta; Iijima, Hiromitsu; Terazono, Shinji
 CS Department Applied Chemistry, Faculty Engineering, Saitama University, Urawa, 338, Japan
 SO Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (1997), 297, 269-276
 CODEN: MCLCE9; ISSN: 1058-725X
 PB Gordon & Breach
 DT Journal
 LA English
 AB Mol. design of analogs of benzo[1,2,3-kl:4,5,6-k'l']dixanthene and anthra[1,9-bc:4,10-b'c']dichromene containing sulfur or nitrogen instead of oxygen was performed. The calculated absorption maxima of compds. containing oxygen or sulfur appeared in the similar region, while, those of their analogs containing nitrogen shifted to longer wavelengths. We have synthesized several new heterocyclic analogs and compared the observed wavelengths with the calculated ones.
 CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 27
 IT 191-22-0 191-90-2, Benzo[1,2,3-kl:4,5,6-k'l']dixanthene
 191-92-4 81331-20-6 116205-51-7 145621-62-1
 145621-65-4 160378-75-6 161788-23-4 194868-32-1 194868-33-2
 194868-38-7 194868-39-8 194868-40-1 194868-41-2
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
 (mol. design and synthesis of novel analogs of benzodixanthene and anthradichromene)
 IT 193629-44-6P 194868-30-9P 194868-34-3P 194868-36-5P
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
 (mol. design and synthesis of novel analogs of benzodixanthene and anthradichromene)
 IT 81-62-9P 117-11-3P 191-88-8P, Benzo[1,2,3-kl:4,5,6-k'l']diacridine 2944-27-6P 3274-19-9P 66012-08-6P
 194868-42-3P 194868-44-5P 194868-45-6P
 194868-46-7P 194868-47-8P 194868-49-0P
 RL: RCT (Reactant); SPN (Synthetic preparation);

PREP (Preparation); RACT (Reactant or reagent)

(synthesis of novel analogs of benzodioxanthene and anthradichromene)

IT 191-90-2, Benzo[1,2,3-kl:4,5,6-k'l']dixanthene 191-92-4

145621-62-1 194868-38-7 194868-39-8

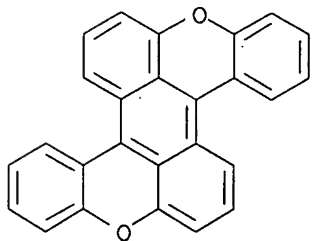
RL: PEP (Physical, engineering or chemical process); PRP (Properties);

PROC (Process)

(mol. design and synthesis of novel analogs of benzodioxanthene and anthradichromene)

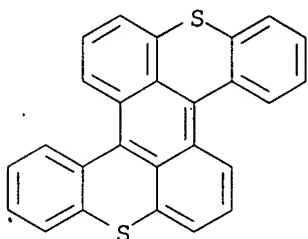
RN 191-90-2 HCAPLUS

CN Benzo[1,2,3-kl:4,5,6-k'l']dixanthene (8CI, 9CI) (CA INDEX NAME)



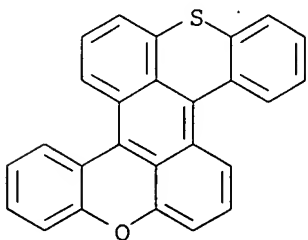
RN 191-92-4 HCAPLUS

CN Benzo[1,2,3-kl:4,5,6-k'l']bisthioxanthene (8CI, 9CI) (CA INDEX NAME)



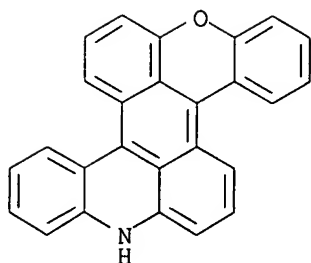
RN 145621-62-1 HCAPLUS

CN Dibenzo[1,8:3,4][2]benzothiopyrano[5,6,7-kl]xanthene (9CI) (CA INDEX NAME)



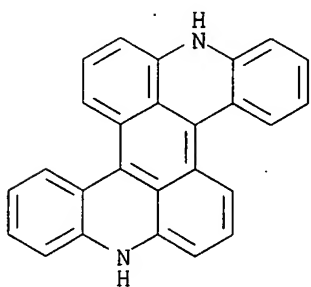
RN 194868-38-7 HCAPLUS

CN 16H-Dibenzo[1,8:3,4][2]benzopyrano[5,6,7-kl]acridine (9CI) (CA INDEX NAME)



RN 194868-39-8 HCAPLUS

CN Benzo[1,2,3-k1:4,5,6-k'1']diacridine, 8,16-dihydro- (9CI) (CA INDEX NAME)



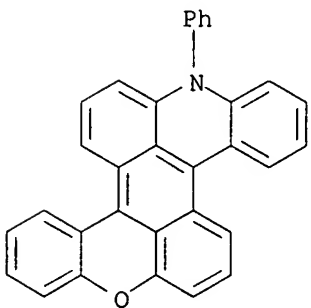
IT 193629-44-6P 194868-30-9P

RL: PEP (Physical, engineering or chemical process); PRP (Properties);
SPN (Synthetic preparation); PREP (Preparation); PROC
(Process)

(mol. design and synthesis of novel analogs of benzodixanthene and
anthradichromene)

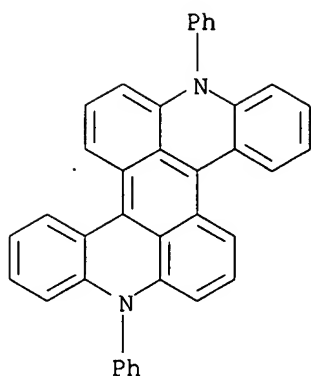
RN 193629-44-6 HCAPLUS

CN 16H-Dibenzo[1,8:3,4][2]benzopyrano[5,6,7-k1]acridine, 16-phenyl- (9CI)
(CA INDEX NAME)

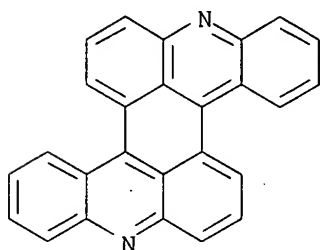


RN 194868-30-9 HCAPLUS

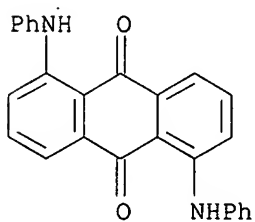
CN Benzo[1,2,3-k1:4,5,6-k'1']diacridine, 8,16-dihydro-8,16-diphenyl- (9CI)
(CA INDEX NAME)



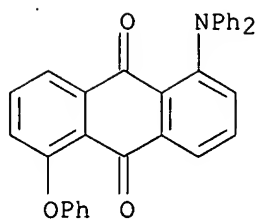
IT 191-88-8P, Benzo[1,2,3-k1:4,5,6-k'1']diacridine 2944-27-6P
 194868-44-5P 194868-45-6P 194868-46-7P
 194868-47-8P 194868-49-0P
 RL: RCT (Reactant); SPN (Synthetic preparation);
 PREP (Preparation); RACT (Reactant or reagent)
 (synthesis of novel analogs of benzodixanthene and anthradichromene)
 RN 191-88-8 HCAPLUS
 CN Benzo[1,2,3-k1:4,5,6-k'1']diacridine. (8CI, 9CI) (CA INDEX NAME)



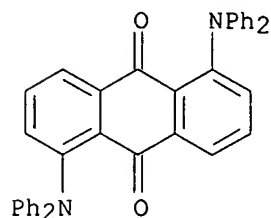
RN 2944-27-6 HCAPLUS
 CN 9,10-Anthracenedione, 1,5-bis(phenylamino)- (9CI) (CA INDEX NAME)



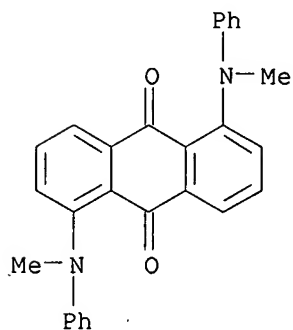
RN 194868-44-5 HCAPLUS
 CN 9,10-Anthracenedione, 1-(diphenylamino)-5-phenoxy- (9CI) (CA INDEX NAME)



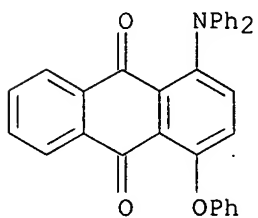
RN 194868-45-6 HCAPLUS
 CN 9,10-Anthracenedione, 1,5-bis(diphenylamino)- (9CI) (CA INDEX NAME)



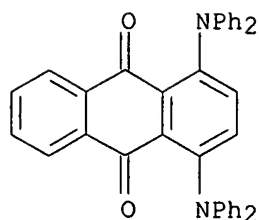
RN 194868-46-7 HCAPLUS
 CN 9,10-Anthracenedione, 1,5-bis(methylphenylamino)- (9CI) (CA INDEX NAME)



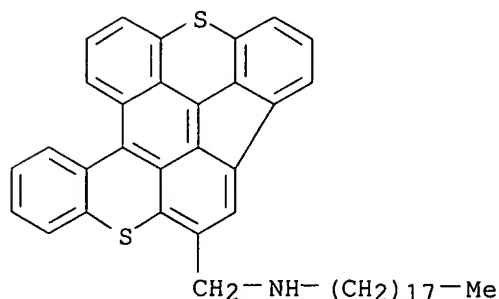
RN 194868-47-8 HCAPLUS
 CN 9,10-Anthracenedione, 1-(diphenylamino)-4-phenoxy- (9CI) (CA INDEX NAME)



RN 194868-49-0 HCAPLUS
 CN 9,10-Anthracenedione, 1,4-bis(diphenylamino)- (9CI) (CA INDEX NAME)

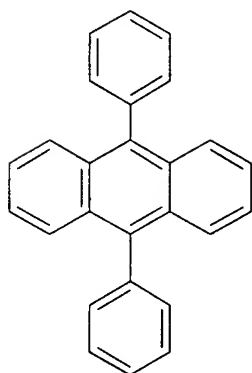


L81 ANSWER 11 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 1995:886453 HCAPLUS
 DN 124:42318
 TI Formation of sub-micrometer structures in soft functionalized
 Langmuir-Blodgett films by atomic force microscopy
 AU Larsen, N. B.; Bjoernholm, T.; Garmaes, J.; Larsen, J.; Schaumburg, K.
 CS Centre for Interdisciplinary Studies of Molecular Interactions, Univ. of
 Copenhagen, Copenhagen, DK-2100, Den.
 SO NATO ASI Series, Series E: Applied Sciences (1995), 292(Ultimate
 Limits of Fabrication and Measurement), 205-12
 CODEN: NAESDI; ISSN: 0168-132X
 PB Kluwer
 DT Journal
 LA English
 AB The fabrication was studied of mol. rectifiers using octadecylaminomethyl-
 dehydrocorbathien Langmuir-Blodgett layers on hydrophobic Si. Holes and
 wire-like resist patterns were created in the films using atomic-force
 microscopy. The shelf-life of these patterns is estimated to be about 1 mo.
 CC 76-2 (Electric Phenomena)
 IT 171740-93-5
 RL: DEV (Device component use); PEP (Physical, engineering or
 chemical process); PROC (Process); USES (Uses)
 (fabrication of mol. rectifiers from Langmuir-Blodgett films using atomic
 force microscopy)
 IT 171740-93-5
 RL: DEV (Device component use); PEP (Physical, engineering or
 chemical process); PROC (Process); USES (Uses)
 (fabrication of mol. rectifiers from Langmuir-Blodgett films using atomic
 force microscopy)
 RN 171740-93-5 HCAPLUS
 CN Indeno[2,1,6,7-klmn:5,4,3-m'n'a']bisthioxanthene-5-methanamine,
 N-octadecyl- (9CI) (CA INDEX NAME)



L81 ANSWER 12 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 1995:677188 HCAPLUS
 DN 123:70390
 TI Reusable heat-sensitive colour imaging material.
 IN Muramoto, Akira
 PA Minnesota Mining and Manufacturing Co., USA
 SO Eur. Pat. Appl., 13 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 629512	A2	19941221	EP 1994-401241	19940606 <--
	EP 629512	A3	19960110		
	R: DE, FR, GB, IT				
	JP 07009766	A2	19950113	JP 1993-135868	19930607 <--
PRAI	JP 1993-135868	A	19930607	<--	
OS	MARPAT 123:70390				
GI					



I

AB A heat sensitive color material is described possessing a substrate, a color material layer laminated on the surface of the substrate, and a protective layer on the color material layer, where the color material layer comprises 100 parts by weight of a binder resin and 20 to 30 parts by weight of an aromatic polycyclic compound containing a 9,10-diphenylanthracene structure represented by the following formula I or a corresponding endoperoxide structure. The imaging material can be repeatedly developed and erased, provides high color d. and high gradation and is stable when exposed to heat and light.

IC ICM B41M0005-28
 ICS G03C0001-73

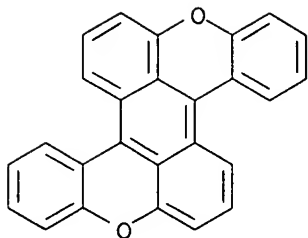
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 1499-10-1, 9,10-Diphenylanthracene 15257-17-7 165133-57-3
 RL: DEV (Device component use); USES (Uses)
 (reusable heat-sensitive color imaging material)

IT 165133-57-3
 RL: DEV (Device component use); USES (Uses)
 (reusable heat-sensitive color imaging material)

RN 165133-57-3 HCAPLUS

CN Benzo[1,2,3-kl:4,5,6-k'l']dixanthene, dimethyl- (9CI) (CA INDEX NAME)



2 (D1-Me)

L81 ANSWER 13 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:444175 HCAPLUS

DN 122:201375

TI Photochromic imaging material with stability both in dark room and light room

IN Muramoto, Akira

PA Minnesota Mining and Manufacturing Co., USA

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06289529	A2	19941018	JP 1993-58530	19930318 <--
PRAI	JP 1993-58530		19930318	<--	

AB The title imaging material has on its support a photochromic image forming layer made of a resin composition containing (a) a binder resin, (b) a photochromic

aromatic polycyclic compound or its endoperoxide 0.1-100 parts per 100 parts of the binder, and (c) a singlet oxygen quencher 0.01-100 parts per 100 parts of the photochromic compound

IC ICM G03C0001-73

ICS B41M0005-26; C09K0009-02; G03C0001-76; G11B0007-24

CC 74-9 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 117752-17-7

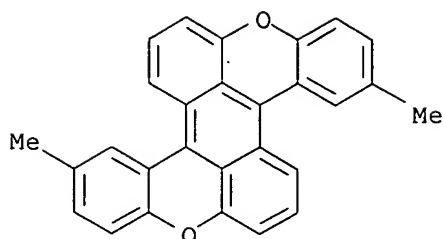
RL: TEM (Technical or engineered material use); USES (Uses)
(photochromic compound for photochromic imaging material)

IT 117752-17-7

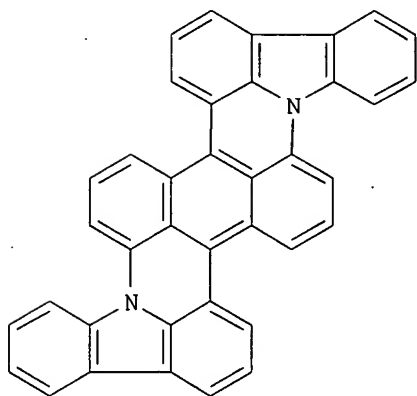
RL: TEM (Technical or engineered material use); USES (Uses)
(photochromic compound for photochromic imaging material)

RN 117752-17-7 HCAPLUS

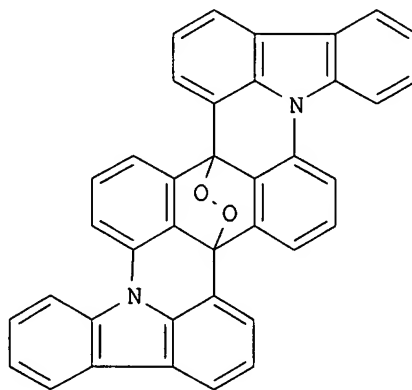
CN Benzo[1,2,3-kl:4,5,6-k'l']dixanthene, 3,11-dimethyl- (9CI) (CA INDEX NAME)



L81 ANSWER 14 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 1995:41939 HCAPLUS
 DN 122:216543
 TI Synthesis and properties of benzo[1,2,3-kl:4,5,6-k'l']diacridines
 AU Tokita, S.; Tsuchida, T.
 CS Fac. Eng., Saitama Univ., Urawa, 338, Japan
 SO Chem. Funct. Dyes, Proc. Int. Symp., 2nd (1993), Meeting Date
 1992, 84-7. Editor(s): Yoshida, Z.; Shirota, Y. Publisher: Mita Press,
 Tokyo, Japan.
 CODEN: 59TQAX
 DT Conference
 LA English
 GI



I



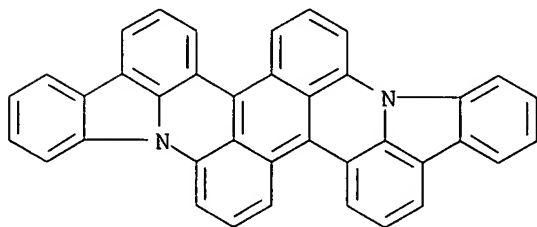
II

AB This paper deals with the synthesis of benzo[1,2,3-kl:4,5,6-k'l']bis(indolo[3,2,1-de]acridine) (I), which (owing to the annelation effect) was more stable than 8,16-diphenyl-8,16-dihydrobenzo[1,2,3-kl:4,5,6-k'l']diacridine. The photochromism of I and its endoperoxide II are investigated.
 CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
 IT 155653-45-5P 155653-47-7P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (synthesis and photochromism of benzodiacridine dye derivs.)
 IT 155653-45-5P 155653-47-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and photochromism of benzodiacridine dye derivs.)

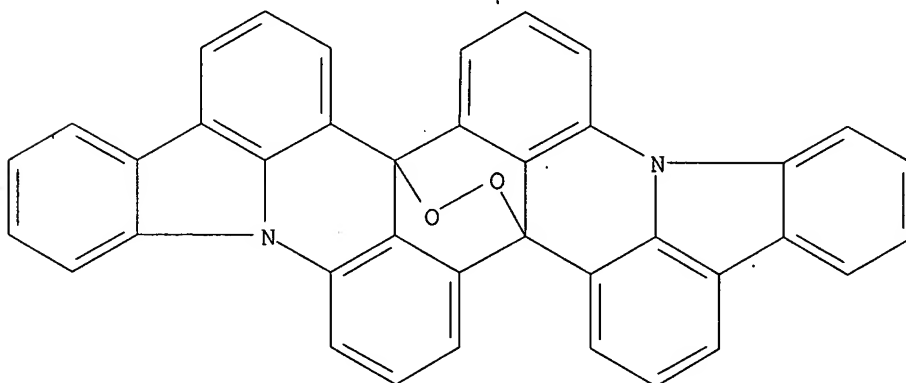
RN 155653-45-5 HCAPLUS

CN Diindolo[3,2,1-de:3',2',1'-d'e']benzo[1,2,3-kl:4,5,6-k'l']diacridine (9CI)
(CA INDEX NAME)



RN 155653-47-7 HCAPLUS

CN 11b,22b-Epidioxydiindolo[3,2,1-de:3',2',1'-d'e']benzo[1,2,3-kl:4,5,6-k'l']diacridine (9CI) (CA INDEX NAME)



L81 ANSWER 15 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1994:483084 HCAPLUS

DN 121:83084

TI Preparation of acridines as photochromic substances

IN Tokita, Sumio; Tsuchida, Tsuyoshi

PA Nisshin Spinning, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

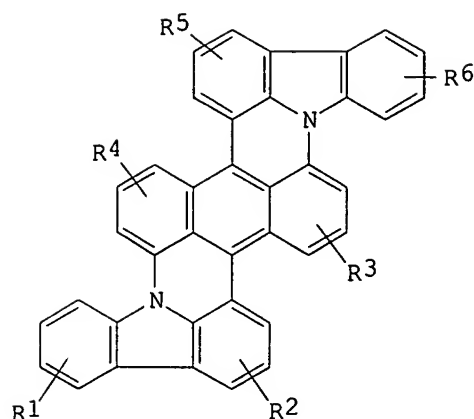
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 06056777	A2	19940301	JP 1992-235330	19920810 <--
PRAI	JP 1992-235330		19920810	<--	
OS	MARPAT 121:83084				
GI					



I

AB The title compds. I [R1 - R6 = H, alkyl, Ph, etc.] are prepared I (R1 = R2 = R3 = R4 = R5 = R6 = H) (II) was prepared in two steps from 1,5-dichloroanthraquinone and carbazole. Under visible **light**, a blue solution of II becomes colorless.

IC ICM C07D0209-86

ICS C07D0209-88; C07D0471-22

ICA C09K0009-02

CC 27-18 (Heterocyclic Compounds (One Hetero Atom))

Section cross-reference(s): 74

IT **155653-47-7P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT **155653-45-5P**

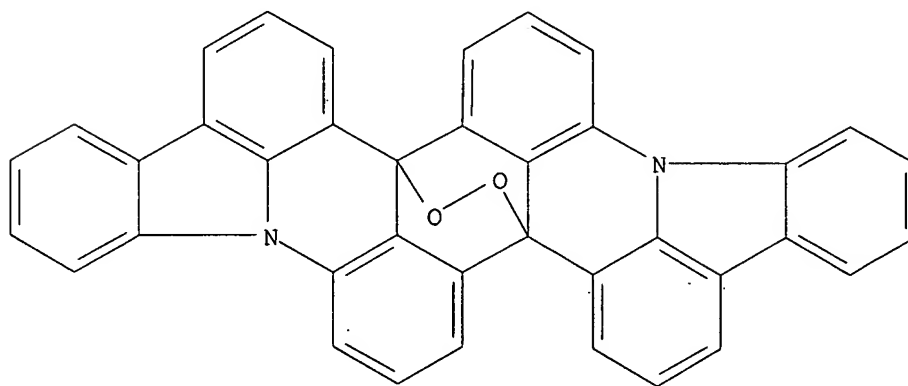
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as photochromic compound)

IT **155653-47-7P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 155653-47-7 HCAPLUS

CN 11b,22b-Epidioxydiindolo[3,2,1-de:3',2',1'-d'e']benzo[1,2,3-kl:4,5,6-k'l']diacridine (9CI) (CA INDEX NAME)

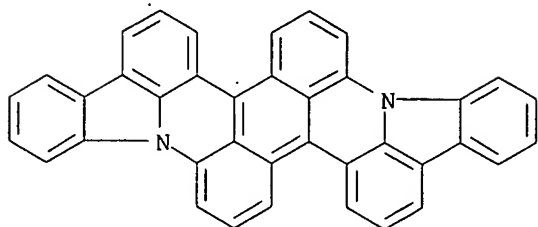


IT **155653-45-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, as photochromic compound)

RN 155653-45-5 HCAPLUS

CN Diindolo[3,2,1-de:3',2',1'-d'e']benzo[1,2,3-kl:4,5,6-k'l']diacridine (9CI)
(CA INDEX NAME)

L81 ANSWER 16 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1993:80835 HCAPLUS

DN 118:80835

TI Synthesis and photochromic properties of unsymmetrical analogs of
benzo[1,2,3-kl: 4,5,6,-k'l']dixanthene and their endoperoxidesAU Tokita, Sumio; Ishii, Takao; Arai, Takeshi; Kobayashi, Yasuhiro; Nakatsu,
Kazumi

CS Dep. Appl. Chem., Saitama Univ., Urawa, 338, Japan

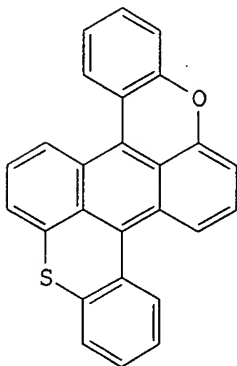
SO Nippon Kagaku Kaishi (1992), (10), 1097-101

CODEN: NKAKB8; ISSN: 0369-4577

DT Journal

LA Japanese

GI



III

AB 1-Phenoxy-5-chloroanthraquinone (I) was synthesized by Ullmann condensation of 1:1 mixture of 1,5-dichloroanthraquinone and potassium salt of phenol. Ullmann condensation of I with potassium salt of thiophenol gave 1-phenoxy-5-(phenylthio)anthraquinone (II). Cyclization of II with a molten mixture of anhydrous AlCl_3 and NaCl afforded thioxantheno[1'9':4,5,6]benzo[kl]xanthene (III). Similarly, cyclization of the condensation product of I with potassium salt of 1-naphthol or 2-naphthol gave 10,18-dioxabenz[a]naphtho[2,1-j]perylene (IV) or 10,18-dioxabenz[a]naphtho[1,2-j]perylene (V). The photooxidn. of these unsym. red compds. III, IV or V with visible light of 541 nm gave the

colorless endoperoxides. The photochem. and thermal properties of these endoperoxides were also investigated.

CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 74

IT 145621-59-6P 145621-60-9P 145621-61-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and cyclization of)

IT 145621-62-1P 145621-63-2P 145621-64-3P

145621-65-4P 145621-66-5P 145621-67-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation and photochromic properties of)

IT 82-21-3P, 1,5-Diphenoxyanthraquinone 78204-81-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with benzenethiol)

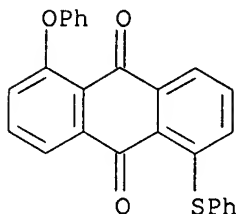
IT 145621-59-6P 145621-60-9P 145621-61-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and cyclization of)

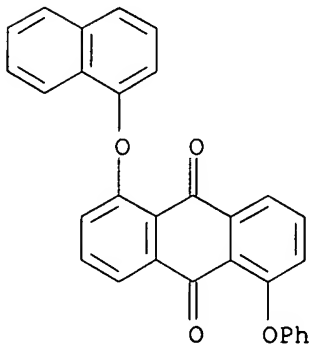
RN 145621-59-6 HCAPLUS

CN 9,10-Anthracenedione, 1-phenoxy-5-(phenylthio)- (9CI) (CA INDEX NAME)



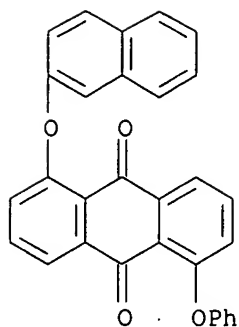
RN 145621-60-9 HCAPLUS

CN 9,10-Anthracenedione, 1-(1-naphthalenyloxy)-5-phenoxy- (9CI) (CA INDEX NAME)



RN 145621-61-0 HCAPLUS

CN 9,10-Anthracenedione, 1-(2-naphthalenyloxy)-5-phenoxy- (9CI) (CA INDEX NAME)



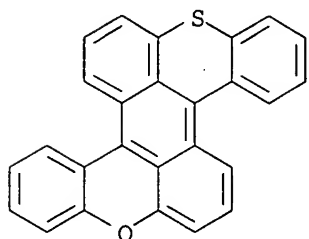
IT 145621-62-1P 145621-63-2P 145621-64-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)

(preparation and photochromic properties of)

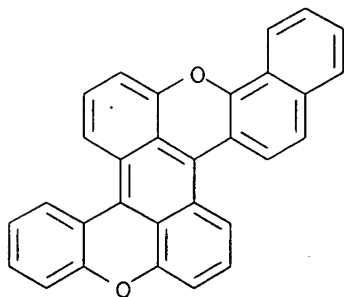
RN 145621-62-1 HCAPLUS

CN Dibenzo[1,8:3,4][2]benzothiopyrano[5,6,7-kl]xanthene (9CI) (CA INDEX NAME)



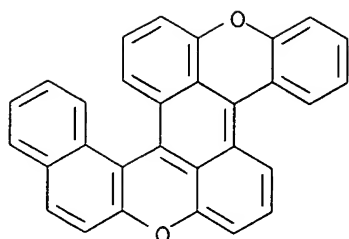
RN 145621-63-2 HCAPLUS

CN Benzo[c]benzo[1,2,3-kl:4,5,6-k'l']dixanthene (9CI) (CA INDEX NAME)

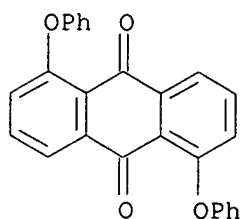


RN 145621-64-3 HCAPLUS

CN Benzo[a]benzo[1,2,3-kl:4,5,6-k'l']dixanthene (9CI) (CA INDEX NAME)



IT 82-21-3P, 1,5-Diphenoxyanthraquinone
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)
 (preparation and reaction of, with benzenethiol)
 RN 82-21-3 HCAPLUS
 CN 9,10-Anthracenedione, 1,5-diphenoxy- (9CI) (CA INDEX NAME)



L81 ANSWER 17 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1992:583982 HCAPLUS

DN 117:183982

TI Optical fiber oxygen sensor

IN Nonaka, Takeshi

PA Sumitomo Electric Industries, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

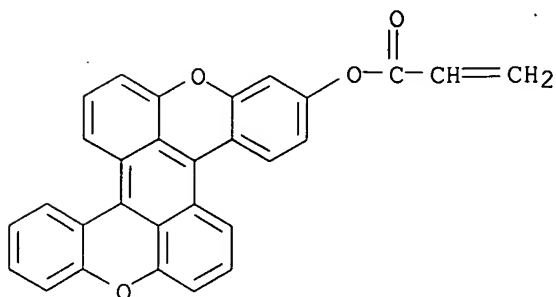
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04161903	A2	19920605	JP 1990-285880	19901025 <--
PRAI	JP 1990-285880		19901025 <--		
AB	In the title optical fiber sensor, the core and/or transparent clad have chemical bonding with an organic compound showing (de)coloration under light irradiation in the presence of O. An optical fiber O sensor comprising a core of poly(Me methacrylate) modified with a photosensitive aromatic polycyclic compound and a clad was prepared				
IC	ICM G02B0006-00 ICS G01N0021-77; G02B0006-02				
CC	79-6 (Inorganic Analytical Chemistry) Section cross-reference(s): 73				
IT	143995-46-4D, reaction products with organic compds. 143995-47-5D, reaction products with organic compds. RL: ANST (Analytical study) (optical fiber having, for oxygen sensor)				
IT	143995-47-5D, reaction products with organic compds.				

RL: ANST (Analytical study)
(optical fiber having, for oxygen sensor)

RN 143995-47-5 HCAPLUS

CN 2-Propenoic acid, benzo[1,2,3-kl:4,5,6-k'l']dixanthen-2-yl ester (9CI)
(CA INDEX NAME)



L81 ANSWER 18 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1992:581453 HCAPLUS

DN 117:181453

TI Optical fiber oxygen sensor containing photosensitive compound

IN Nonaka, Takeshi

PA Sumitomo Electric Industries, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04161904	A2	19920605	JP 1990-285881	19901025 <--
PRAI	JP 1990-285881		19901025	<--	

AB In the title optical fiber sensor, the core and/or transparent clad have a dispersion of an organic compound showing (de)coloration under **light** irradiation in the presence of O. An optical fiber O sensor having a core of poly(Me methacrylate) containing photosensitive aromatic polycyclic compound dispersion was prepared

IC ICM G02B0006-00

ICS G01N0021-77; G02B0006-02

CC 73-12 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 191-90-2, Benzo[1,2,3-kl:4,5,6-k'l']dixanthene 5737-94-0,
Dibenzo[a,j]perylene-8,16-dione

RL: PROC (Process)

(optical fiber having dispersion of, for oxygen sensor)

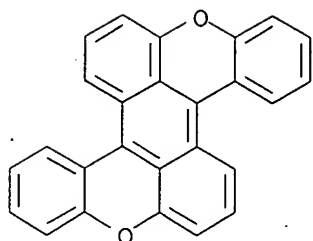
IT 191-90-2, Benzo[1,2,3-kl:4,5,6-k'l']dixanthene

RL: PROC (Process)

(optical fiber having dispersion of, for oxygen sensor)

RN 191-90-2 HCAPLUS

CN Benzo[1,2,3-kl:4,5,6-k'l']dixanthene (8CI, 9CI) (CA INDEX NAME)



L81 ANSWER 19 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1991:646108 HCAPLUS

DN 115:246108

TI Photoelectric conversion device containing titanium phthalocyanine

IN Oda, Yasuhiro; Fujimaki, Yoshihide

PA Konica Co., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03110873	A2	19910510	JP 1989-249580	19890925 <--
	JP 2756712	B2	19980525		
PRAI	JP 1989-249580		19890925	<--	

OS MARPAT 115:246108

AB The device consists of a p-type semiconductor layer containing titanyl phthalocyanine, having Cu-K α x-ray diffraction peaks at 9.5, 24.1, and 27.2°, dispersed in a resin with $\leq 1012 \Omega$ -cm volume resistivity laminated with a n-type semiconductor layer. The device is used in photosensors, optical recording materials, solar cells, etc. The device showed high photovoltaic conversion effect.

IC ICM H01L0031-10

CC 76-5 (Electric Phenomena)

Section cross-reference(s): 52

IT 128-65-4 1306-24-7, Cadmium selenide, uses and miscellaneous 4378-61-4
137318-93-5

RL: USES (Uses)

(photoelec. conversion device photoconductive substance)

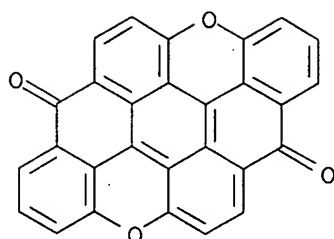
IT 137318-93-5

RL: USES (Uses)

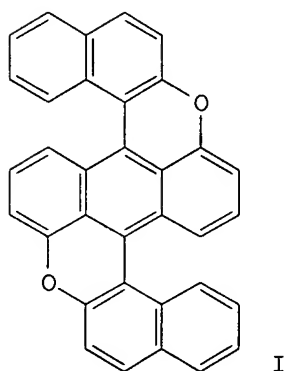
(photoelec. conversion device photoconductive substance)

RN 137318-93-5 HCAPLUS

CN Anthra[2,1,9,8-klmna:6,5,10,4-k'l'm'n'a']dixanthene-7,14-dione (9CI) (CA INDEX NAME)

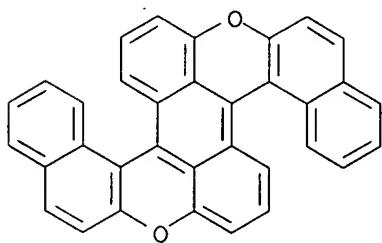


L81 ANSWER 20 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 1989:515076 HCAPLUS
 DN 111:115076
 TI Studies on condensed polycyclic aromatic compounds having photochromic properties. III. Synthesis and photochromic properties of annellated benzo[1,2,3-kl:4,5,6-k'l']dixanthene and their endoperoxides
 AU Tokita, Sumio; Arai, Takeshi; Ohoka, Makibi; Nishi, Hisao
 CS Dep. Appl. Chem., Saitama Univ., Urawa, 338, Japan
 SO Nippon Kagaku Kaishi (1989), (5), 876-9
 CODEN: NKAKB8; ISSN: 0369-4577
 DT Journal
 LA Japanese
 OS CASREACT 111:115076
 GI

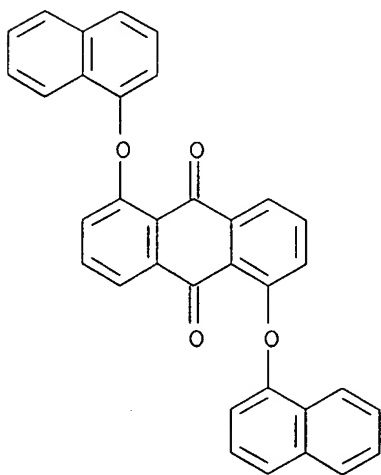


AB 10,20-Dioxadinaphtho[1,2-a:1',2'-j]perylene (I) and 10,20-dioxadinaphtho[2,1-a:2',1'-j]perylene (II) were synthesized by cyclization of 1,5-bis(1- or 2-naphthyloxy)anthraquinones, which were prepared from 1,5-dichloroanthraquinone and 2-naphthol (or 1-naphthol). The electronic absorption spectrum of I or II showed some resemblance to that of benzo[1,2,3-kl:4,5,6-k'l']dixanthene (III) except for a considerable red shift (.apprx.30 nm). The photooxidn. of the above red compds. I and II at 541 nm gave colorless endoperoxides. Photooxidn. of I, which is the most sterically hindered derivative, proceeded about 2 times faster than that of III or II. The photochem. and thermal properties of the endoperoxides were also investigated.
 CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))
 Section cross-reference(s): 74
 IT 188-05-6
 RL: RCT (Reactant); RACT (Reactant or reagent)

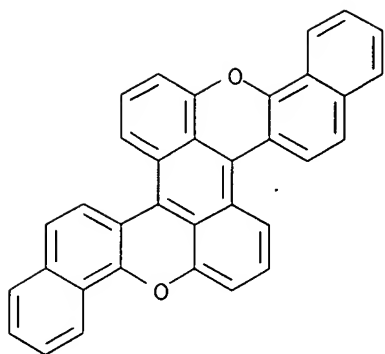
(photochem. oxidation of)
 IT 122528-35-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation and cyclization of)
 IT 122528-36-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation and photochem. oxidation of)
 IT 188-05-6
 RL: RCT (Reactant); RACT (Reactant or reagent) (photochem. oxidation of)
 RN 188-05-6 HCAPLUS
 CN Dibenzo[a,a']benzo[1,2,3-kl:4,5,6-k'l']dixanthene (9CI) (CA INDEX NAME)



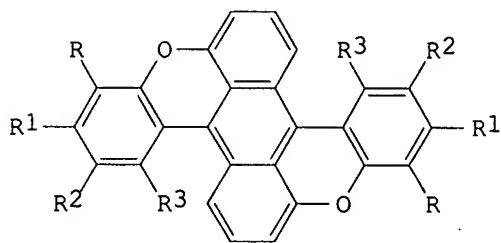
IT 122528-35-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation and cyclization of)
 RN 122528-35-2 HCAPLUS
 CN 9,10-Anthracenedione, 1,5-bis(1-naphthalenyloxy)- (9CI) (CA INDEX NAME)



IT 122528-36-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation and photochem. oxidation of)
 RN 122528-36-3 HCAPLUS
 CN Dibenzo[c,c']benzo[1,2,3-kl:4,5,6-k'l']dixanthene (9CI) (CA INDEX NAME)

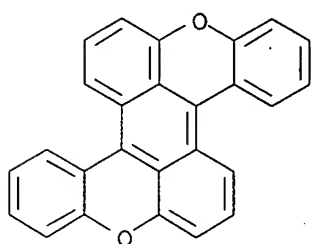


L81 ANSWER 21 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 1989:8072 HCAPLUS
 DN 110:8072
 TI Studies on condensed polycyclic aromatic compounds having photochromic properties. II. Synthesis and photochromic properties of methyl derivative of benzo[1,2,3-kl : 4,5,6-k'l']dixanthene
 AU Tokita, Sumio; Arai, Takeshi; Toya, Michihiko; Nishi, Hisao
 CS Dep. Appl. Chem., Saitama Univ., Urawa, 338, Japan
 SO Nippon Kagaku Kaishi (1988), (5), 814-18
 CODEN: NKAKB8; ISSN: 0369-4577
 DT Journal
 LA Japanese
 OS CASREACT 110:8072
 GI

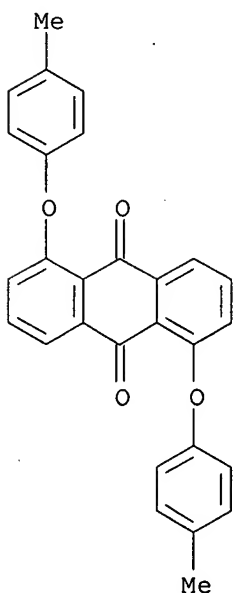


AB Me derivs. I (R = R1 = R3 = H, R2 = Me; R = Me, R1 = R2 = R3 = H; R = R2 = H, R1 = R3 = Me) of benzo[1,2,3-kl:4,5,6-k'l']dixanthene I (R = R1 = R2 = R3 = H) (II) were prepared by the cyclization of 1,5-diphenoxyanthraquinones, which were prepared from 1,5-dichloroanthraquinone and potassium salt of cresol or xlenol. Electronic absorption spectra of methylated I showed almost the same profile as that of II. The photooxidn. of the above red compds. I with visible light of 541 nm gave the corresponding colorless endoperoxides. Tetra-Me derivative I (R = R2 = H, R1 = R3 = Me), which is the most sterically hindered one among the compds. I, photooxidized about 1.5 times faster than other I. The endoperoxide also showed better thermal stability.
 CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))
 IT 191-90-2
 RL: RCT (Reactant); RACT (Reactant or reagent)

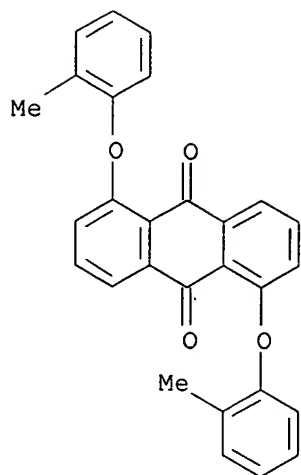
(photochem. oxidation of, endoperoxide from)
 IT 117752-14-4P 117752-15-5P 117752-16-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)
 (preparation and cyclization of)
 IT 117752-17-7P 117752-18-8P 117752-19-9P
 117752-20-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and photochem. oxygenation of, endoperoxide from)
 IT 191-90-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (photochem. oxidation of, endoperoxide from)
 RN 191-90-2 HCAPLUS
 CN Benzo[1,2,3-kl:4,5,6-k'l']dixanthene (8CI, 9CI) (CA INDEX NAME)



IT 117752-14-4P 117752-15-5P 117752-16-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)
 (preparation and cyclization of)
 RN 117752-14-4 HCAPLUS
 CN 9,10-Anthracenedione; 1,5-bis(4-methylphenoxy)- (9CI) (CA INDEX NAME)

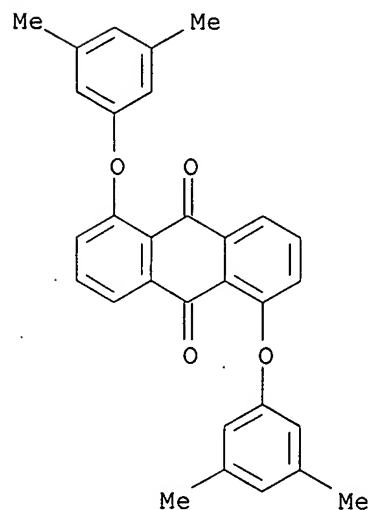


RN 117752-15-5 HCAPLUS
 CN 9,10-Anthracenedione, 1,5-bis(2-methylphenoxy)- (9CI) (CA INDEX NAME)



RN 117752-16-6 HCAPLUS

CN 9,10-Anthracenedione, 1,5-bis(3,5-dimethylphenoxy)- (9CI) (CA INDEX NAME)



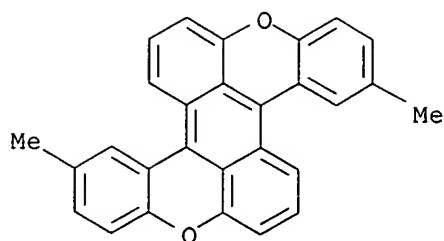
IT 117752-17-7P 117752-18-8P 117752-19-9P
117752-20-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and photochem. oxygenation of, endoperoxide from)

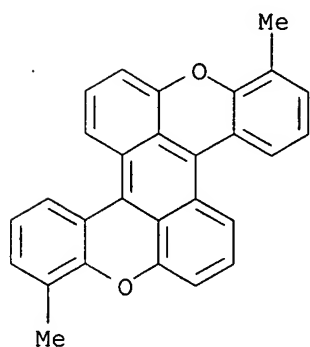
RN 117752-17-7 HCAPLUS

CN Benzo[1,2,3-k1:4,5,6-k'1']dixanthene, 3,11-dimethyl- (9CI) (CA INDEX NAME)



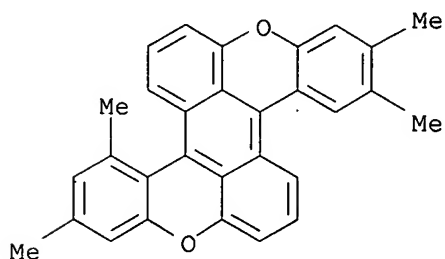
RN 117752-18-8 HCAPLUS

CN Benzo[1,2,3-kl:4,5,6-k'l']dixanthene, 1,9-dimethyl- (9CI) (CA INDEX NAME)



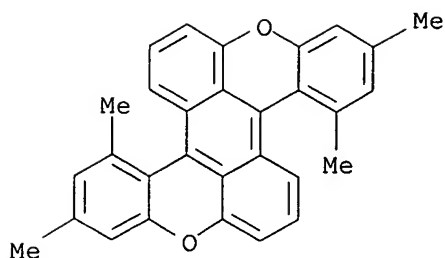
RN 117752-19-9 HCAPLUS

CN Benzo[1,2,3-kl:4,5,6-k'l']dixanthene, 2,4,10,12-tetramethyl-, stereoisomer (9CI) (CA INDEX NAME)



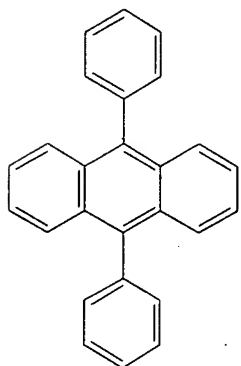
RN 117752-20-2 HCAPLUS

CN Benzo[1,2,3-kl:4,5,6-k'l']dixanthene, 2,4,10,12-tetramethyl-, stereoisomer (9CI) (CA INDEX NAME)



L81 ANSWER 22 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 1987:487299 HCAPLUS
 DN 107:87299
 TI Optical recording medium
 IN Kishine, Nobuyuki; Ishikawa, Akira; Imamura, Tetsuya; Takeuchi, Setsu
 PA Kao Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62053885	A2	19870309	JP 1985-193469	19850902 <--
	JP 07014659	B4	19950222		
PRAI	JP 1985-193469		19850902	<--	
GI					



I

AB The title optical recording medium is composed of a condensed polycyclic aromatic compound having a substructure I. The compound is preferably selected from tetrabenzo(de, hi, op, st)pentacene, tetrabenzo(de, h, kl, rst)pentaphene, 9,10-diphenylanthracene, dibenzo(aj)perylene-1,6-dione, anthra(1,9-bc,4,10-b'c')dichromen, benzo(1,2,3-kl,4,5,6-k'l')dixanthene, and 5,6,11,12 tetraphenylnaphthacene. The optical recording disk shows excellent **light** transmittance and recording stability.

IC ICM B41M0005-26
 ICS G11B0007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 188-13-6, Tetrabenzo(de,h,kl,rst)pentaphene 191-22-0 191-79-7

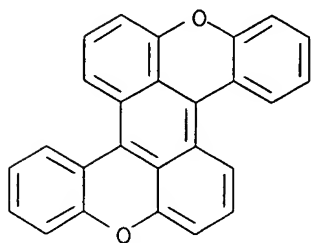
191-90-2 1499-10-1, 9,10-Diphenylanthracene 5737-94-0
RL: TEM (Technical or engineered material use); USES (Uses)
(optical recording medium containing)

IT 191-90-2

RL: TEM (Technical or engineered material use); USES (Uses)
(optical recording medium containing)

RN 191-90-2 HCAPLUS

CN Benzo[1,2,3-k1:4,5,6-k'1']dixanthene (8CI, 9CI) (CA INDEX NAME)



L81 ANSWER 23 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1982:509376 HCAPLUS

DN 97:109376

TI Development of a new photochromic structural principle based on reversible photooxidation

AU Schmidt, R.; Drews, W.; Brauer, H. D.

CS Inst. Phys. Theor. Chem., Frankfurt/Main, D-6000/1, Fed. Rep. Ger.

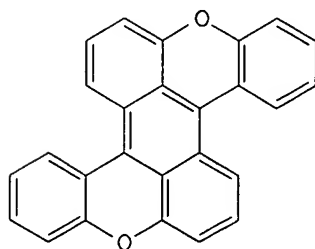
SO Journal of Photochemistry (1982), 18(4), 365-78

CODEN: JPCMAE; ISSN: 0047-2670

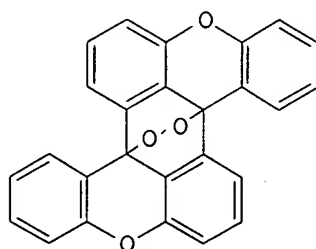
DT Journal

LA German

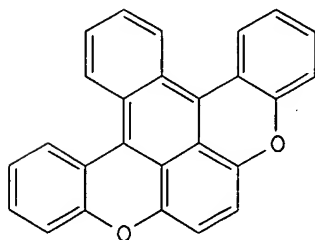
GI



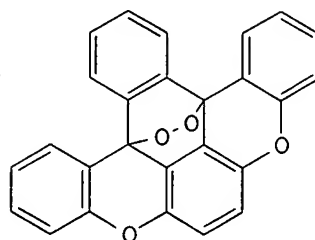
I



II

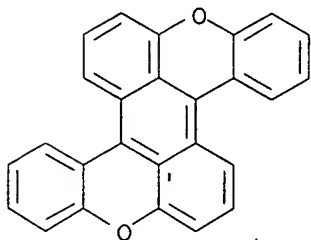


III

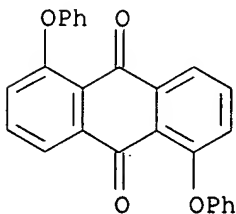


IV

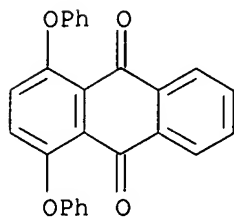
- AB Endoperoxides (PO's) of aromatic hydrocarbons (KW's) produced by photooxidn. may be split thermally as well as photochem. with the quantum yield Q1 to give the products KW and O2. Both reactions compete with the thermally or photochem. induced rearrangements of the endoperoxides, which occur with the yields Adece and Qdec, resp. The ratio Q1/Qdec detes. the degree of reversibility of the potential photochromic systems: PO .dblharw. KW + O2. A close correlation between Adece and Qdec can be demonstrated. Furthermore a relationship is found between the structure and the values of Adece and Qdec, resp., of certain endoperoxides. On the basis of these results and data from the literature a concept for the structure of highly reversible photochromic systems is proposed. An examination of the photochromic properties of the systems I-II and III-IV confirms the developed concept.
- CC 22-7 (Physical Organic Chemistry)
- IT 191-22-0P 191-90-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and photooxidn. of)
- IT 82-21-3P 43033-00-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and reaction with hydroquinone in presence of aluminum chloride)
- IT 191-90-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and photooxidn. of)
- RN 191-90-2 HCAPLUS
- CN Benzo[1,2,3-kl:4,5,6-k'l']dixanthene (8CI, 9CI) (CA INDEX NAME)



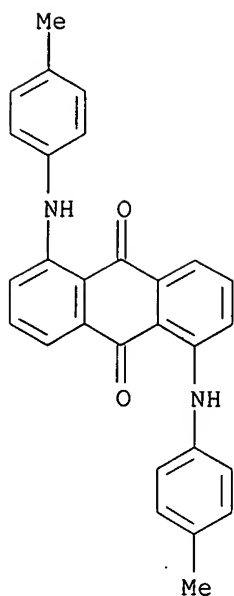
- IT 82-21-3P 43033-00-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and reaction with hydroquinone in presence of aluminum chloride)
- RN 82-21-3 HCAPLUS
- CN 9,10-Anthracenedione, 1,5-diphenoxy- (9CI) (CA INDEX NAME)



RN 43033-00-7 HCAPLUS
 CN 9,10-Anthracenedione, 1,4-diphenoxy- (9CI) (CA INDEX NAME)



L81 ANSWER 24 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 1980:215125 HCAPLUS
 DN 92:215125
 TI Reactions of 1,5-dichloroanthraquinone with nucleophiles
 AU Ruediger, Edward H.; Kaldas, Magdy L.; Gandhi, Sham S.; Fedryna, Cristi; Gibson, Martin S.
 CS Dep. Chem.; Brock Univ., St. Catharines, ON, L2S 3A1, Can.
 SO Journal of Organic Chemistry (1980), 45(10), 1974-8
 CODEN: JOCEAH; ISSN: 0022-3263
 DT Journal
 LA English
 OS CASREACT 92:215125
 AB Reactions of 1,5-dichloroanthraquinone (I) with various nucleophiles were examined to evaluate possibilities for selective substitution. 1-Amino-5-chloroanthraquinone was obtained from I by reaction with NaN₃ in Me₂SO or with NH₃ in presence of KF, but I with KNH₂ in NH₃ gave m-ClC₆H₄CO₂H. Conditions were found for preferential substitution in reactions of I with p-MeC₆H₄NH₂, (Me₂N)₃PO (II), and HCONHMe (III). Reagent III is preferred for making 1-chloro-5-(methylamino)anthraquinone, though this compound predominates in mixts. produced when II is used. KOH in EtOCH₂CH₂OH converts I to the corresponding mono- and diethers of 1,5-dihydroxyanthraquinone, while NaSH and I gave bis(5-chloroanthraquinonyl) sulfide.
 CC 26-5 (Condensed Aromatic Compounds)
 IT 82-20-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (4repn. and cyclo hydration of)
 IT 82-38-2P 82-45-1P 117-11-3P 117-79-3P 129-43-1P 2987-66-8P
 5960-55-4P 6344-62-3P 18084-37-2P 18084-38-3P 71502-46-0P
 73178-73-1P 73178-74-2P 73178-75-3P 73178-76-4P
 73178-77-5P 73178-78-6P 73178-79-7P 73192-96-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 IT 82-20-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (4repn. and cyclo hydration of)
 RN 82-20-2 HCAPLUS
 CN 9,10-Anthracenedione, 1,5-bis[(4-methylphenyl)amino]- (9CI) (CA INDEX NAME)

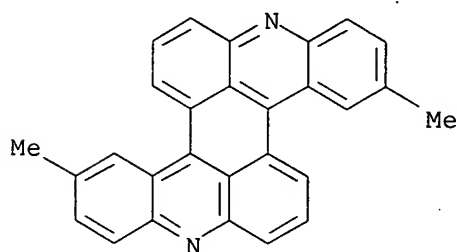


IT 73178-73-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 73178-73-1 HCAPLUS

CN Benzo[1,2,3-k1:4,5,6-k'1']diacridine, 3,11-dimethyl- (9CI) (CA INDEX NAME)



L81 ANSWER 25 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1975:450769 HCAPLUS

DN 83:50769

TI Xerographic plate containing photoinjecting polynuclear quinone pigments

IN Regensburger, Paul J.; Jakubowski, James J.

PA Xerox Corp., USA

SO U.S., 13 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3877935	A	19750415	US 1972-292702	19720927 <--
PRAI	US 1970-94066	A1	19701201	<--	
AB	Polynuclear quinones, especially anthraquinone derivs., flavantrones, and				

polynuclear quinones having >3 condensed aromatic rings, have both efficient photogeneration and injection characteristics with active transport materials and are useful in the preparation of xerog. plates. Thus, a xerog. plate is fabricated by coating a nylon-coated Al support at room temperature with an 0.8 μ thick layer of pyranthrone and then overcoating with poly(vinylcarbazole) from a 180:20 solvent solution of PhMe-cyclohexanone.

IC G03G

INCL 096001500

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)

IT 128-66-5 128-70-1 128-70-1D, 8,16-Pyranthrene-dione, brominated
129-09-9 641-13-4 1324-11-4 1785-51-9 28259-80-5 38582-25-1

55852-37-4

RL: USES (Uses)

(electrophotog. photoinjecting pigment)

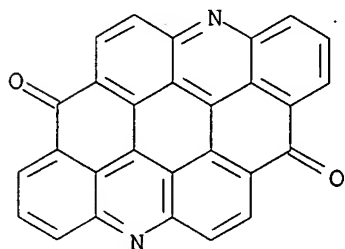
IT 55852-37-4

RL: USES (Uses)

(electrophotog. photoinjecting pigment)

RN 55852-37-4 HCAPLUS

CN Benzo[fg]benzo[6,7]phenanthridino[2,1,10,9-jklmn]thebenidine-7,14-dione
(9CI) (CA INDEX NAME)



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